#1

MEMORANDUM

To: Parks and Recreation Board

From: Jesus M. Olivares, Director
Parks and Recreation Department

Date: July 22, 2003

Subject: Site Plan Correction at 3002 Scenic Drive
File No. SP-01-0251DS

A site plan correction has been received from Bruce Aupperle on the behalf of Jerry and Johnstone Bell to change the dimensions and position of a boat dock that has been constructed and red tagged at 3002 Scenic Drive. The dock was built not in accordance to the approved site plan.

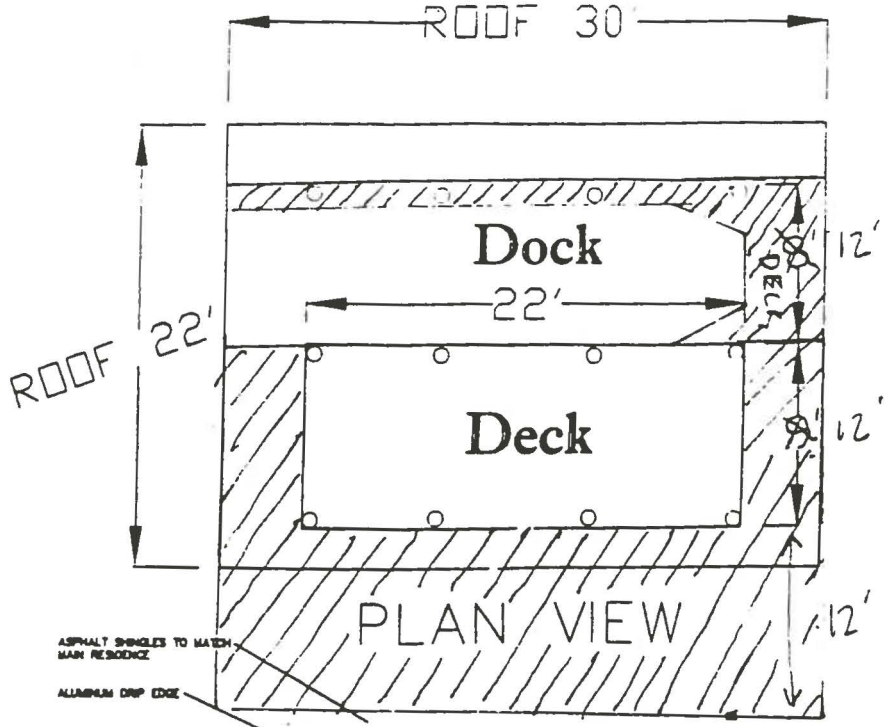
The Parks and Recreation Department (PARD) staff has reviewed the site plan correction and finds they do not meet the requirements of Article XIII, Section 25-2-1176, Parts B and D, (Requirements for the Construction of Boat Docks) of the Land Development Code. Parks and Recreation Board approved an 8'X22' boat dock placed parallel to the shore. Parks and Recreation Board gave variances for this dock to be constructed. The dock that was built is 12'X30'. The 30' measured parallel to the shoreline is 39% of the shoreline frontage. The approved 22' was 29% of the shoreline frontage. The approved dock was to be dug into the shore 3' and extend 5' from the original shore. If the dock were dug into the shore, the dock would have extended into the slough 20% of the soughs width. The dock was not dug into shore and extends 12' from shore. The dock is now 43% of the slough width.

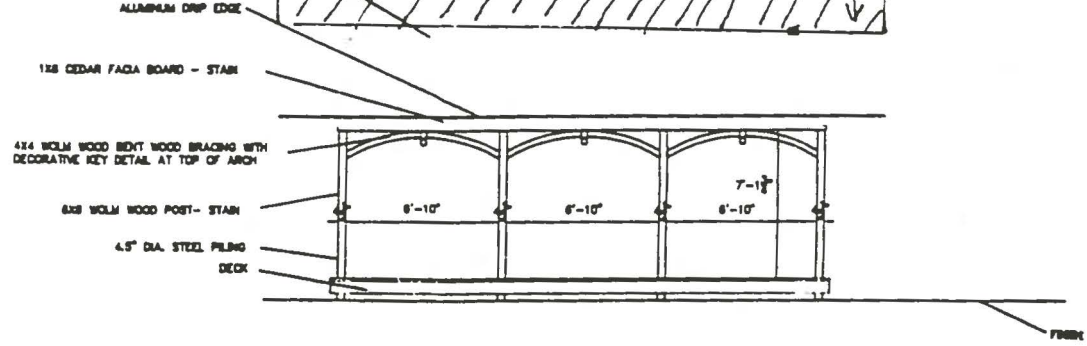
The Parks and Recreation Board shall make a recommendation on the distance a dock may extend into the slough and approval by the Parks and Recreation Board is required for a structure to be greater than 20% of the shoreline width.

Jesus M. Olivares, Director
Parks and Recreation Department

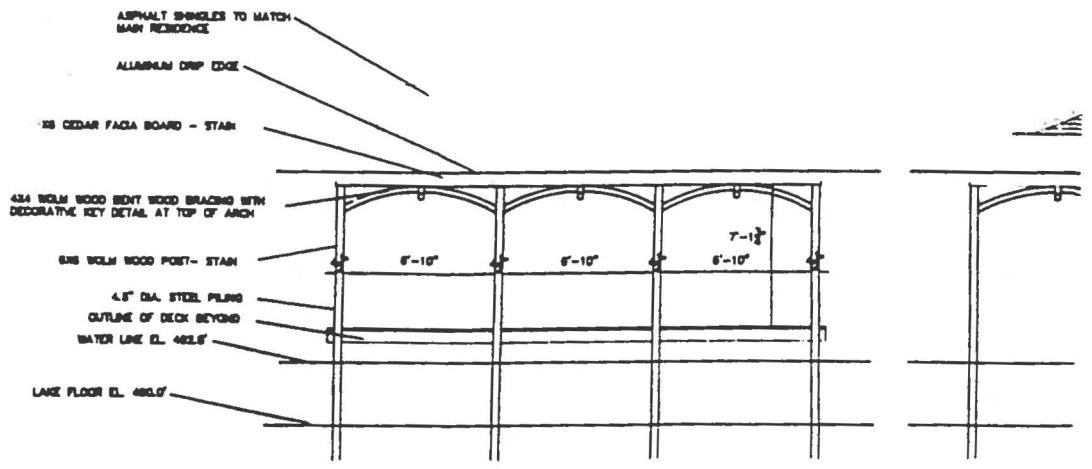
(1)

= NOT APPROVED



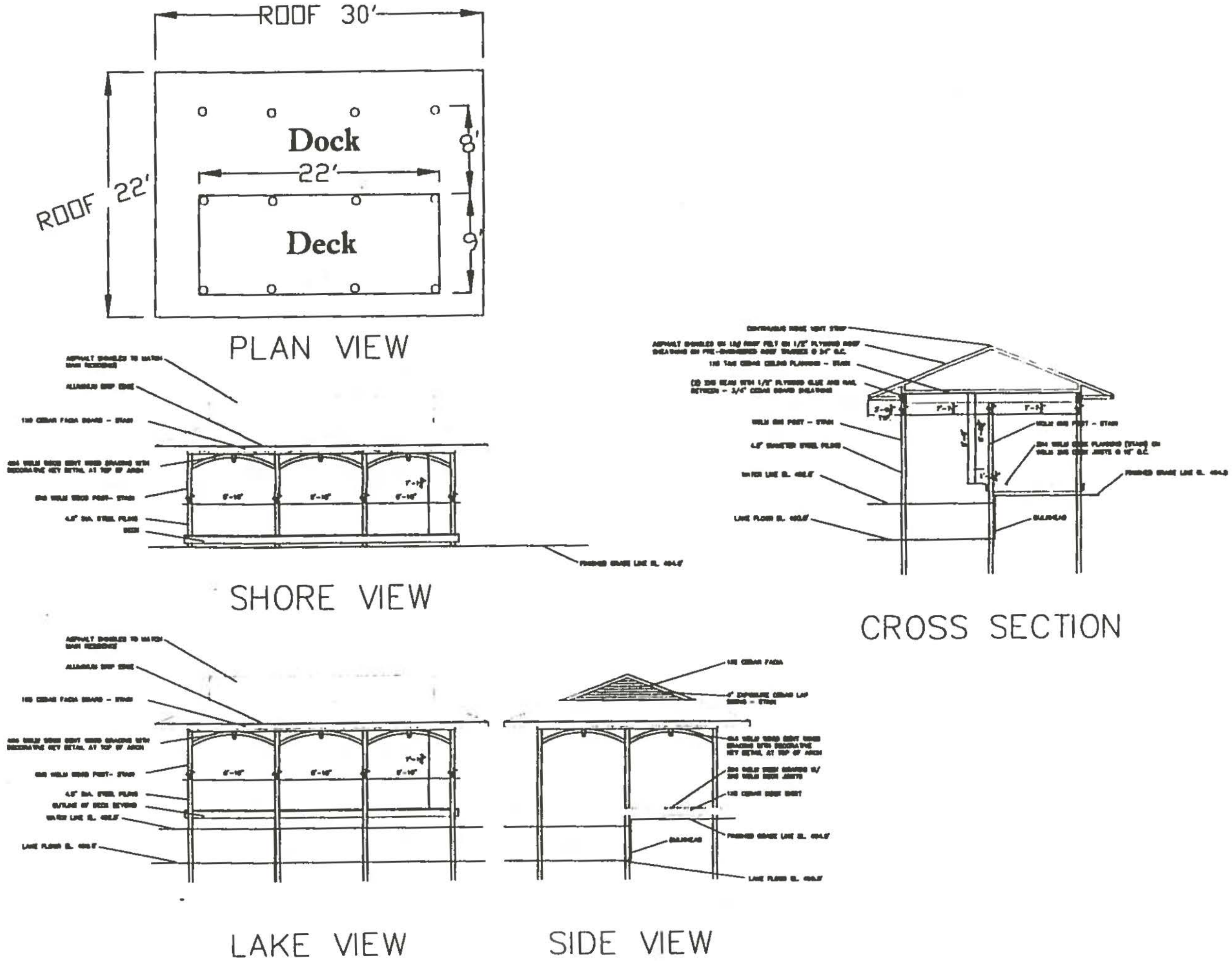


SHORE VIEW



(2)

LAKE VIEW SID



APPROVED AND RELEASED
APR 1 8 2002
CITY OF AUSTIN
4-18-02

Development Review and Inspection Department   Date

AUPPERLE COMPANY
Engineering, Planning & Development Services

3002 Scenic Drive
BOAT DOCK SCHEMATIC

DESIGNED:
APPROVED:
SCALE: 1" = 5'
DATE: May 2001
SHEET 4 OF 5

#2

MEMORANDUM

To: Parks and Recreation Board

From: Jesus M. Olivares, Director
Parks and Recreation Department

Date: July 22, 2003

Subject: Construction of Bordelon dock at 2910 Edgewater Drive
File No. SP-03-0176DS

A site plan has been received from LOC Consultants on the behalf of Dr. Jerry Bordelon at 2910 Edgewater Drive.

The Parks and Recreation Department (PARD) staff has reviewed plans for the proposed project and finds they do not meet the requirements of Article XIII, Section 25-2-1176, Parts B and D, (Requirements for the Construction of Boat Docks) of the Land Development Code. The proposed dock extends into the lake more than 30' and has a width greater than 20% of the shoreline frontage.

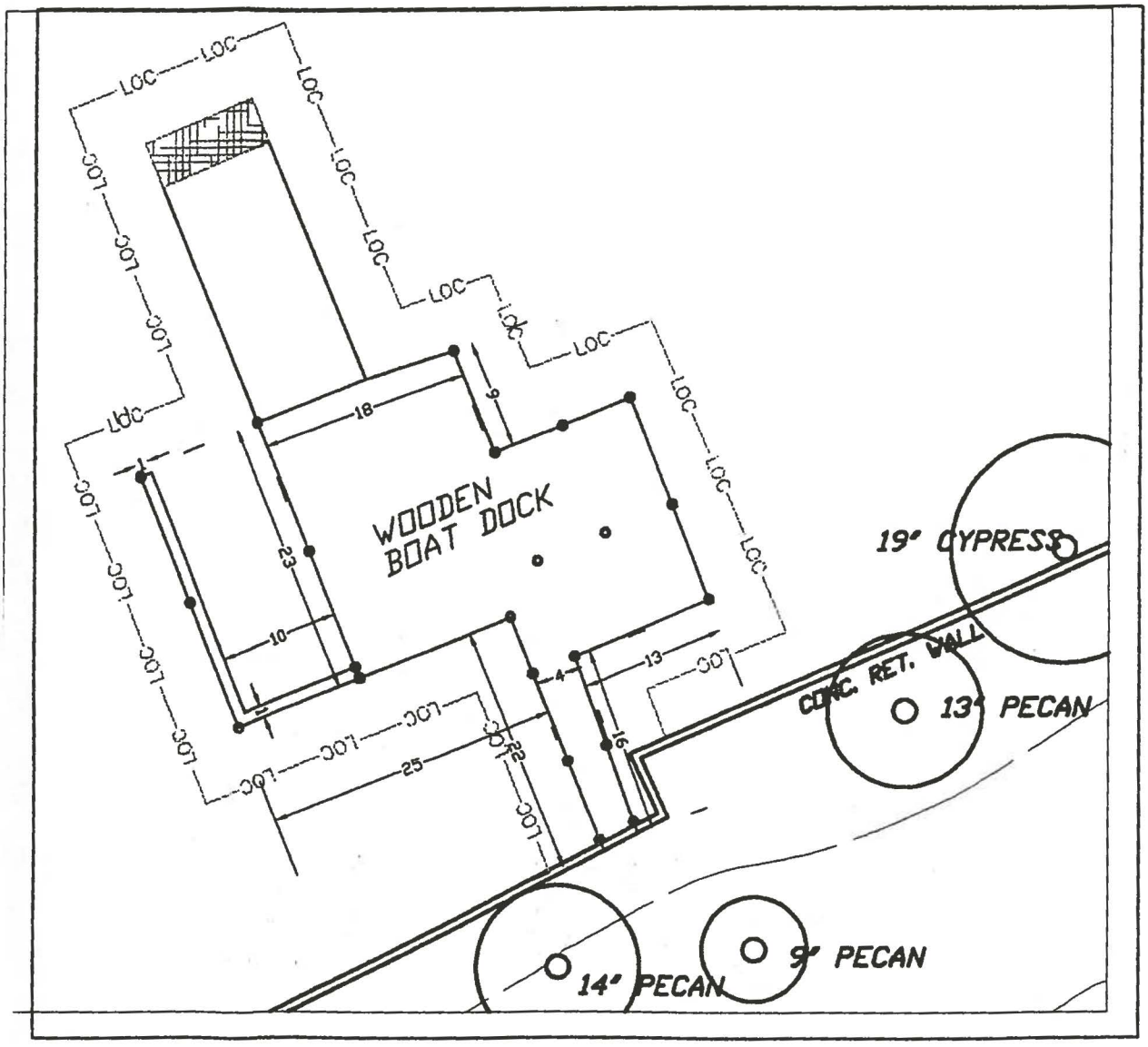
The Parks and Recreation Board shall make a recommendation on the distance a dock may extend into the lake and approval by the Parks and Recreation Board is required for a structure to be greater than 20% of the shoreline width.

Jesus M. Olivares, Director
Parks and Recreation Department

(1)

THE CONSTRUCTION SEQUENCE IS PROVIDED AS A GENERAL CONSTRUCTION AID ONLY. ALL NECESSARY STEPS METHODS SPECIFIED HEREIN, IN THE PROJECT MANUA, AND/OR IN THE CITY OF AUSTIN STANDARD SPECIFICATIONS BE ADHERED TO.

BOAT DOCK DETAIL
SCALE = 1:10




JERRY BORDELON

#3

Information Packet

For

BARTHOLOMEW PARK

Austin Clean Water Program
Upper Tannehill – Broadmoor and Cameron Project

CIP No. 4570-237-8566

City of Austin
Austin Clean Water Program

on behalf of the
Water and Wastewater Utility

July 2003

INTRODUCTION

The City of Austin (City) has initiated the Austin Clean Water Program to eliminate the occurrence of sanitary sewer overflows (SSO), the presence of which threatens human health and the environment. For the Upper Tannehill Broadmoor and Cameron project, this elimination of SSO is being accomplished by upsizing existing sanitary sewer lines to increase capacity and replacing old infrastructure. Where possible, sanitary sewer lines are being rerouted to remove the lines from the Upper Tannehill Creek. The project also includes steam bank stabilization improvements to mitigate stream instability and ensure the structural integrity of the sanitary sewer system.

PROJECT NEED AND JUSTIFICATION

In April 29, 1999, the EPA found that the City's sanitary sewer system was not in compliance with the City's National Pollution Discharge Elimination System (NPDES) or the Clean Water Act. The EPA issued an Administrative Order (AO) requiring the City to take corrective action immediately to improve the sanitary sewer system to avoid future SSO. The City contracted with several qualified firms to perform Sewer System Evaluation Surveys (SSES) for the purpose of identifying problem areas within the sanitary sewer system and to recommend improvements to the system. The SSES for the Upper Tannehill Broadmoor Cameron project area identified various defects that are directly or indirectly attributable to SSO within the Upper Tannehill sub-basin. To alleviate these defects, the SSES included recommendations for rehabilitation or replacement of public sector main lines, manholes, service lines and lateral lines. In addition, stream bank stabilization measures were also recommended to ensure the stability of new system.

ALTERNATIVES TO THE USE OF PARKLAND

The proposed 24-inch sanitary sewer line in Bartholomew Park replaces an existing 15-inch line and connects into an existing 24-inch line located in the park. The stream stabilization activities are necessary to ensure the integrity of the sanitary sewer lines located in the park.

PROJECT DESCRIPTION AND SCHEDULE

The proposed sanitary sewer lines include approximately 5,400 linear feet of 24-inch, 360 linear feet of 18-inch, 1,025 linear feet of 12-inch and 875 linear feet of 8-inch. Of this, approximately 740 linear feet of 24-inch sanitary sewer line will be installed in the Upper Tannehill Creek bottom and bank located in Bartholomew Park, replacing the existing 15-inch sanitary sewer line. In addition, approximately 1,600 linear feet of stream bank stabilization will be constructed in portion of the Upper Tannehill Creek located in Bartholomew Park. The construction of the sanitary sewer line will generally require a 20-foot wide permanent easement and a 15-foot wide temporary working space easement (i.e., 7.5 feet on either side of the permanent easement). A variable width temporary working space easement along the creek's alignment will also be required for stream bank stabilization within the park. A 100-feet x 200-feet temporary staging area and materials storage site will also be required in the park with possible locations of either the parking lot adjacent to the swimming pool or the grassy area between Berkman Drive and the parking lot.

The sanitary sewer line in the park will be a 24-inch diameter Centrifugally Cast Fiber Reinforced Polymer Mortar Pipe buried between 5 and 15 feet deep. The project has an anticipated total construction cost of approximately $3.7 million, of which $1.1 million will be used for stream bank stabilization. The project is scheduled to begin construction in July 2004 and end in December 2005. Construction of the sanitary sewer line in the park will occur during the beginning of the construction period, with the stream bank stabilization construction activities occurring at the end of the construction period. The temporary staging area and materials storage site will be used through the duration of construction.

SHORT TERM EFFECTS OF CONSTRUCTION

Short-term effects during construction in Bartholomew Park will be minimal. Disturbance of the area within the permanent and temporary use agreement will include preconstruction clearing, trenching, pipe installation, temporary spoil and material storage, heavy vehicle tracking and soil compaction. There will be no traffic impacted by the construction of this project. As shown in the attached photos, at least one tree will be removed as part of the project (see "Restoration Plan" below for further information). There will be short-term riparian disturbance within the easement; however, no long-term effects to the riparian habitat are anticipated since all disturbed areas will be restored and revegetated.

LONG TERM EFFECTS OF CONSTRUCTION

The only long-term effects to the Bartholomew Park as a result of the proposed construction, operation and maintenance of the sanitary sewer line will be the restriction of building structures or similar improvement within the permanent use agreement area. This is consistent with the restrictions now placed on the area, which is within the 100-year floodway of Upper Tannehill; therefore, no long-term effects due to the project are anticipated.

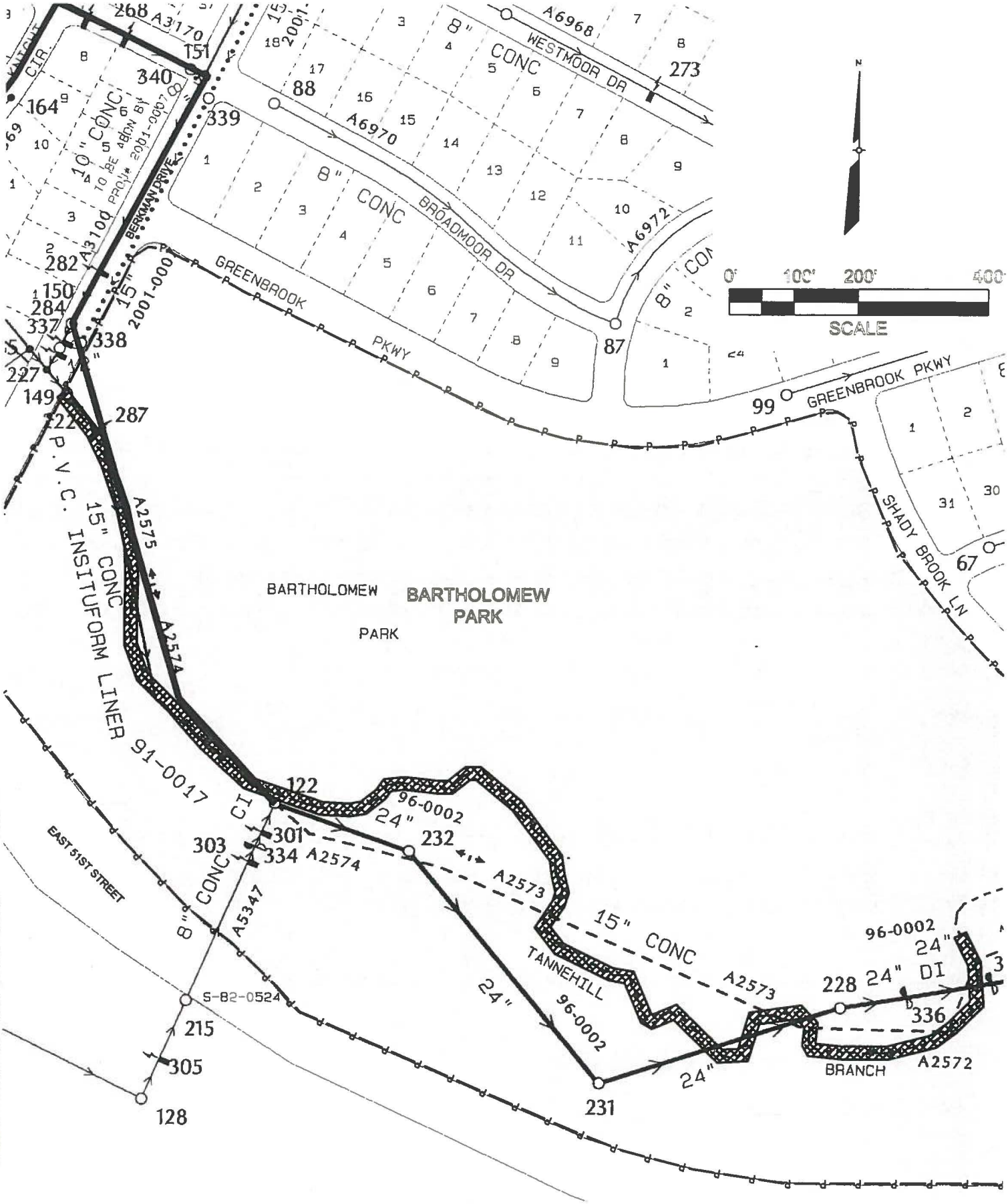
RESTORATION PLAN

All disturbed land will be restored and revegetated to a condition equal to or better than that which existed prior to construction. A detailed tree survey and evaluation were performed by the engineer and is attached hereto. At least one tree will be removed as part of the project. As the stream bank stabilization design is finalized, it may illustrate that it is necessary to remove additional trees as part of the project. A final design is expected to be complete by July 18, 2003 and ACWP will notify PARD of any additional trees slated for removal.

The proposed project will positively impact Bartholomew Park through improvements to the degraded steam bank. In addition, as requested by PARD, we are currently evaluating the possibility of relocating waterlines to park facilities due to their proximity to our project. Also, as requested by PARD, we are examining the potential for additional lateral support at the football field as part of stream bank stabilization.

All site restoration will be completed in accordance with the *Standard Specifications and Construction Standards* of the City of Austin. All construction and site restoration for that portion of the project within parkland will also be completed in accordance with PARD's *Construction in Parks Specifications.*

As with all City construction projects, the Contractor will be required to provide a one-year warranty of his work including such restoration, revegetation and tree replacement.



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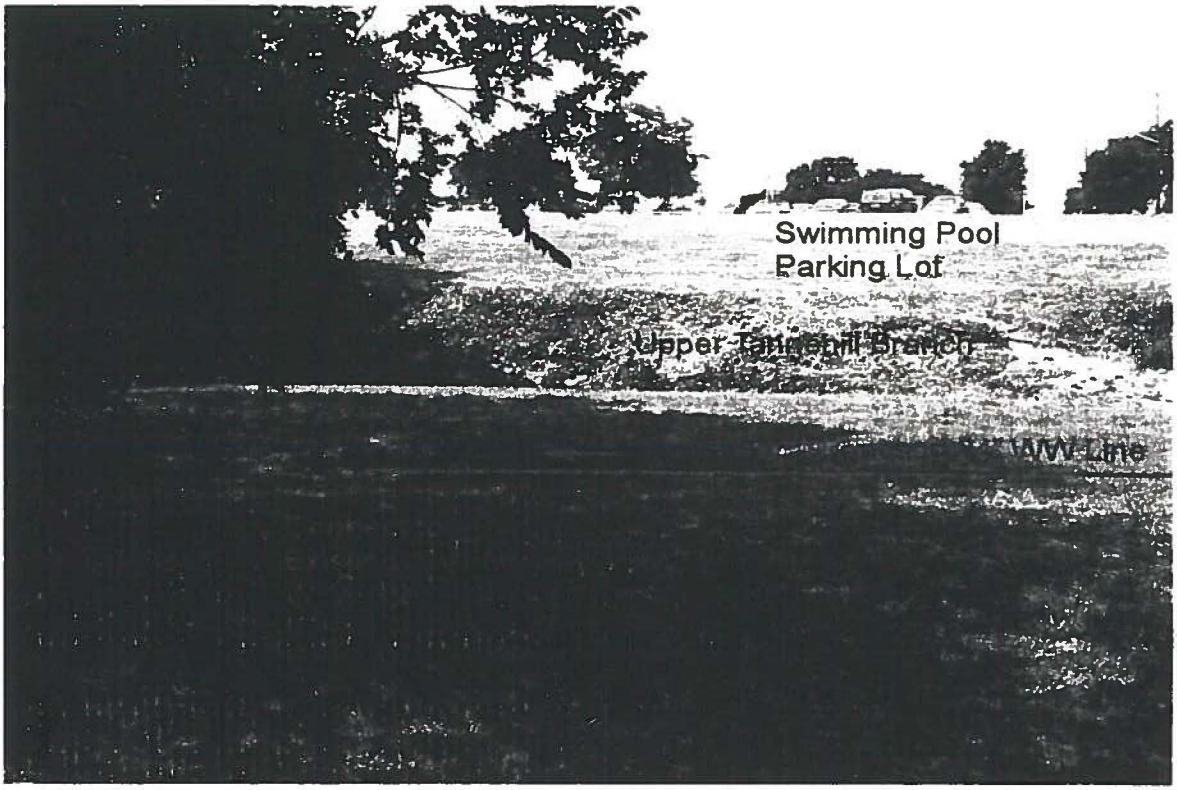
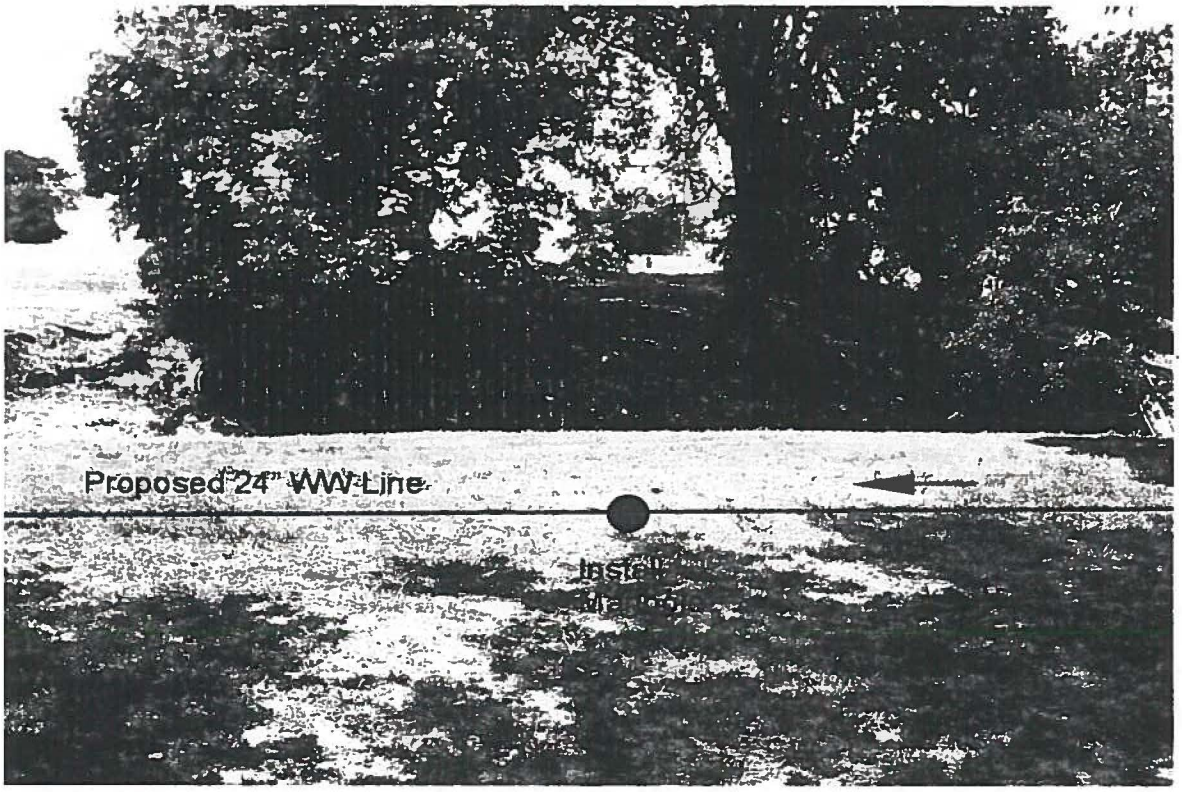
UPPER TANNEHILL BROADMOOR AND CAMERON PROJECT LOCATION BARTHOLOMEW PARK

acwp
Austin Clean Water Program


Swimming Pool
Parking Lot
Upper Tannehill Branch
WW Line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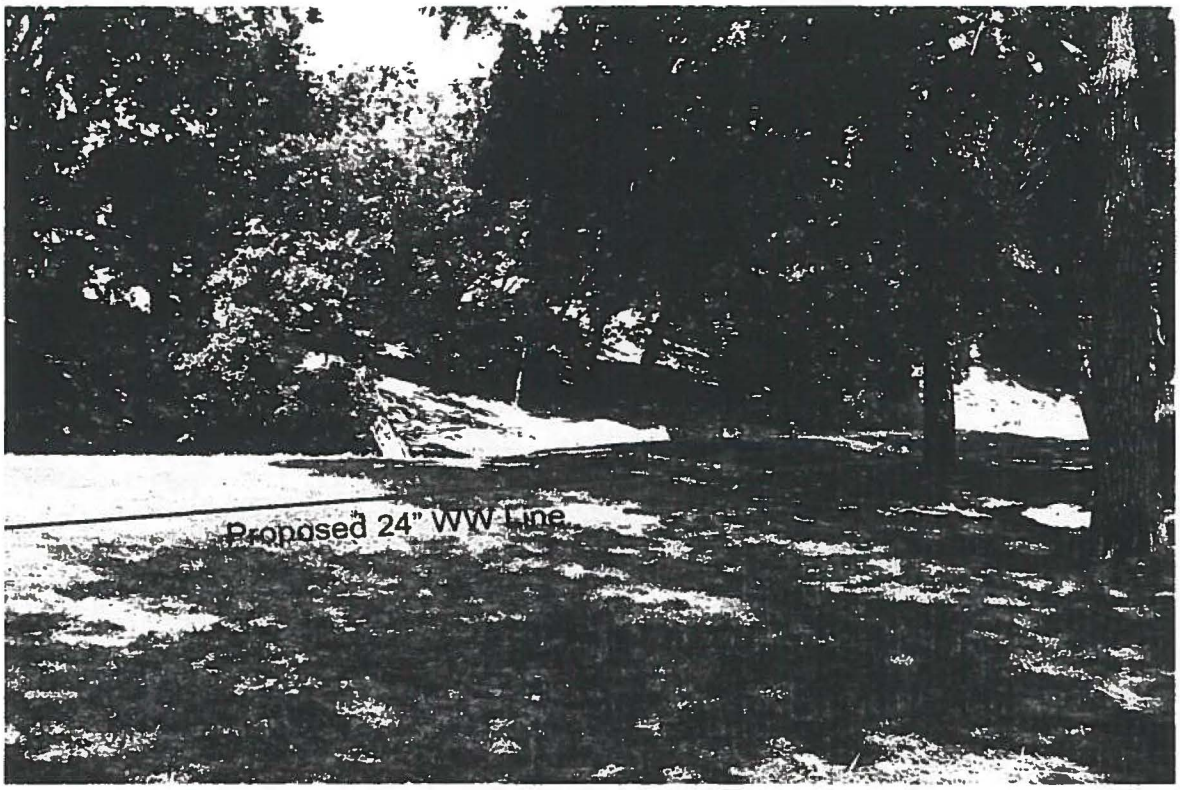
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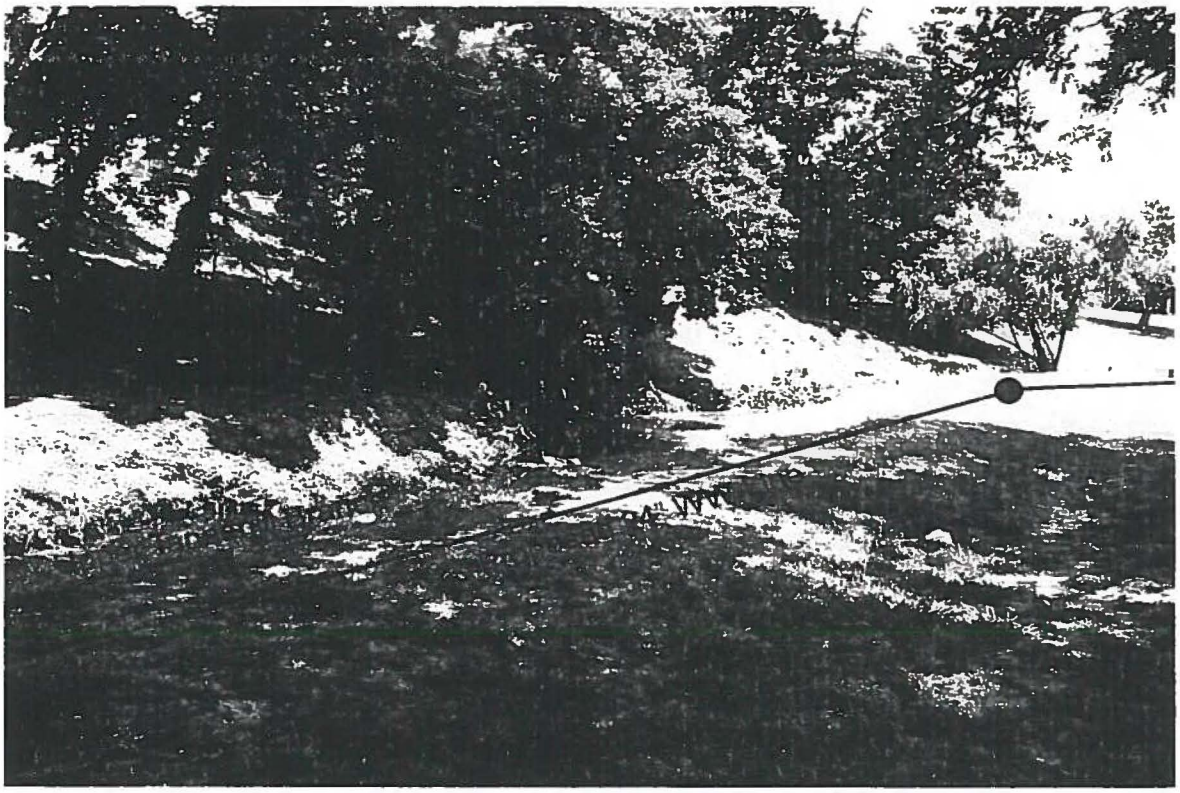

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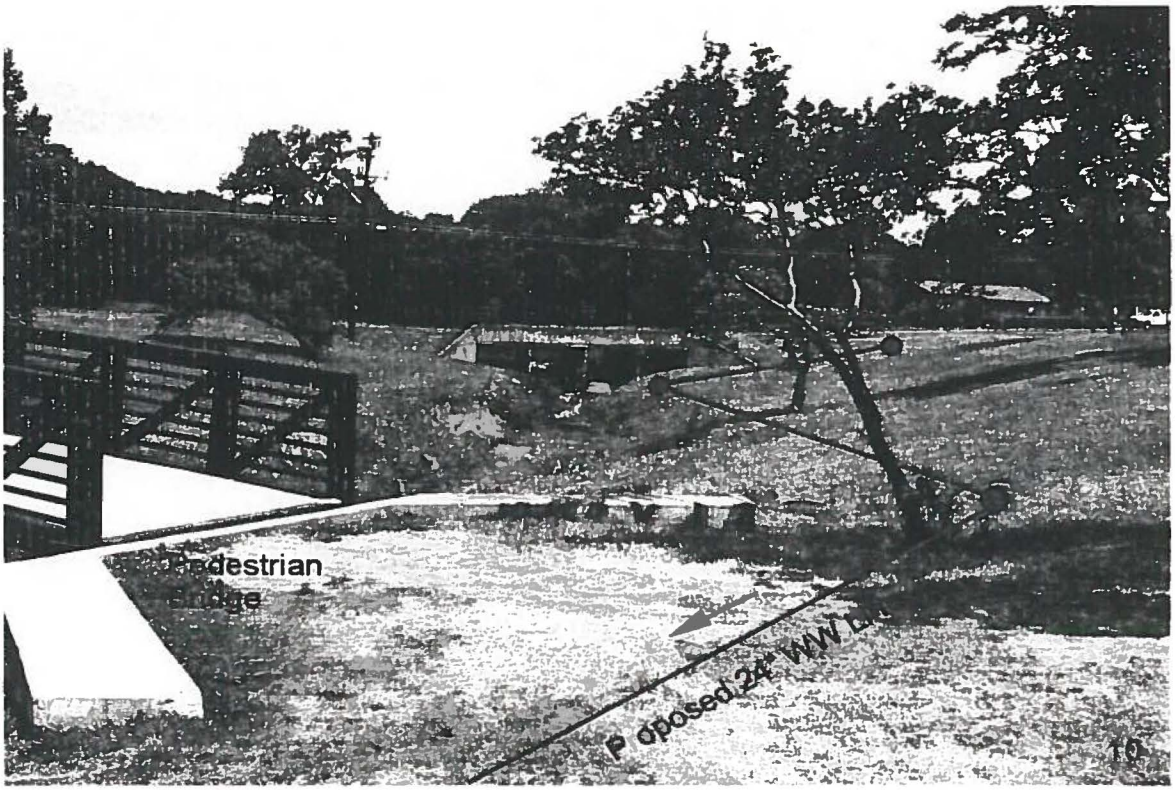
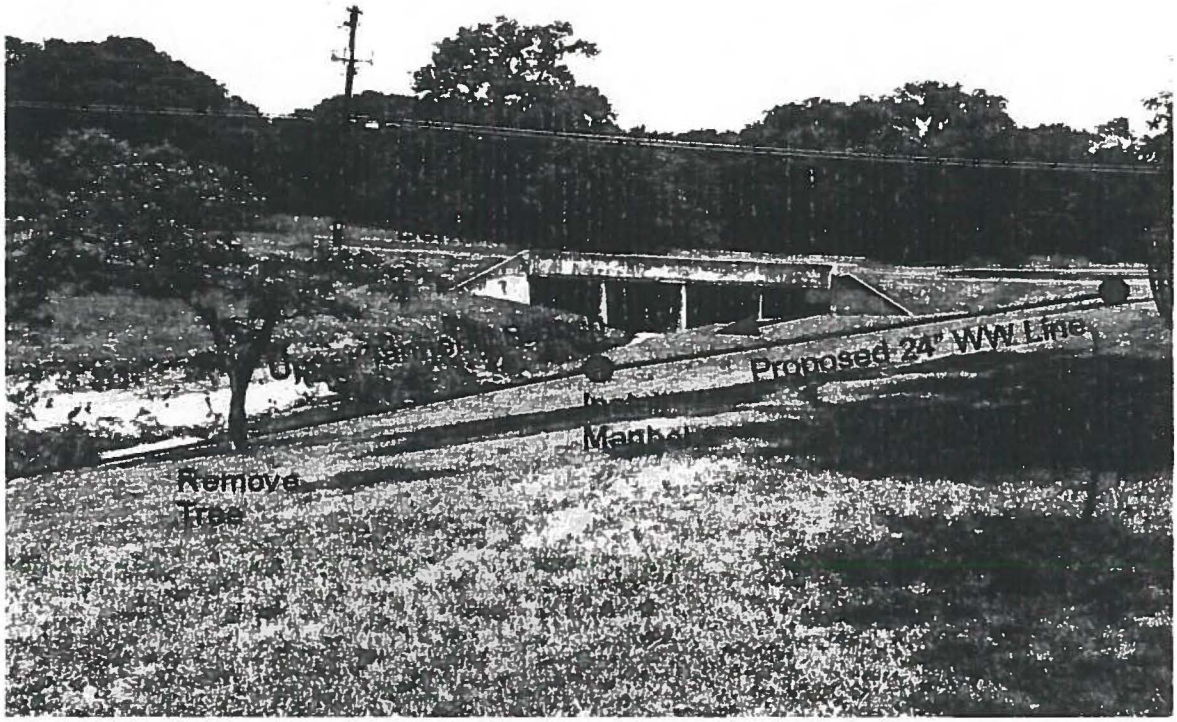
Manhole

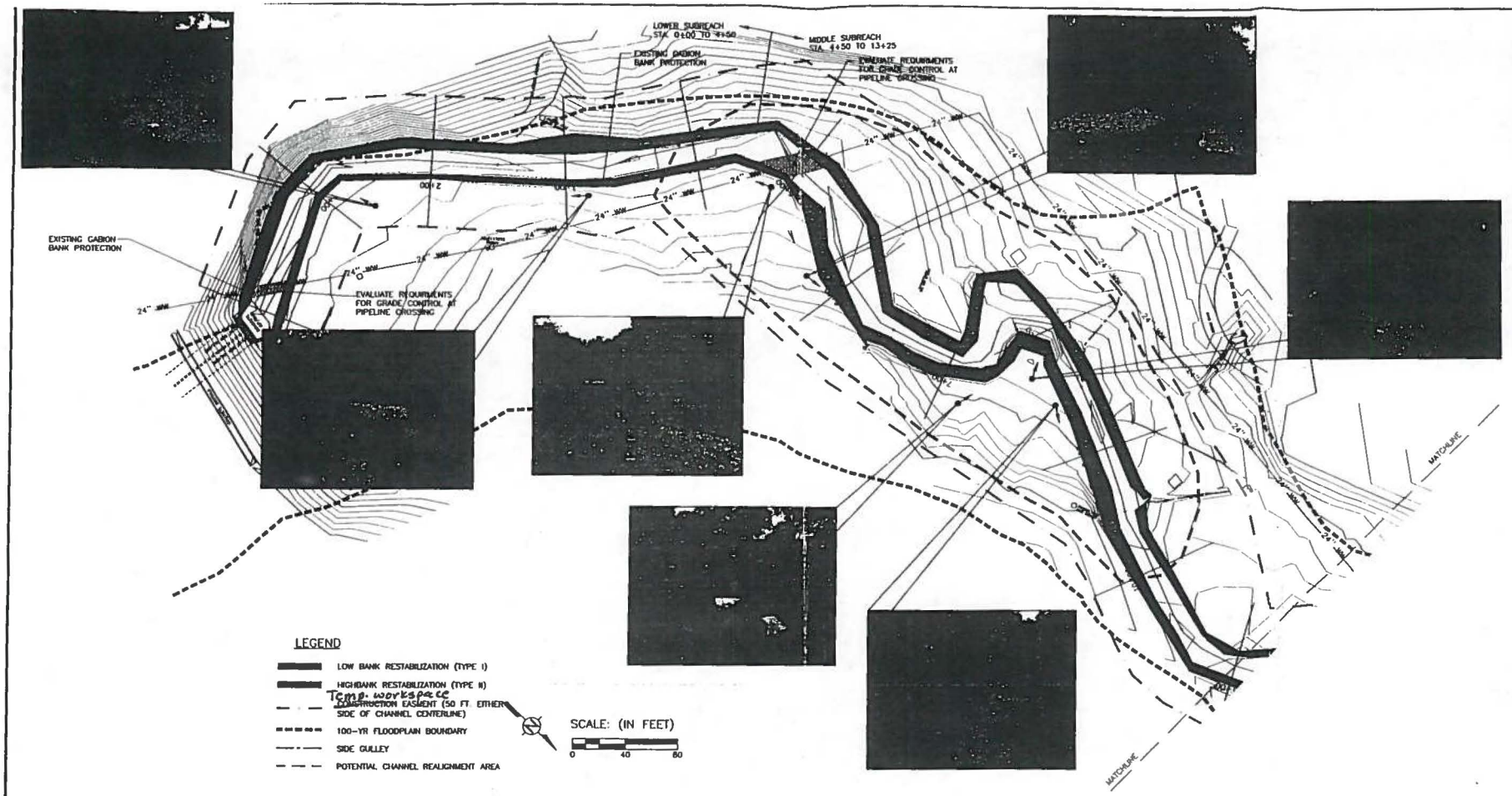

Pedestrian Bridge

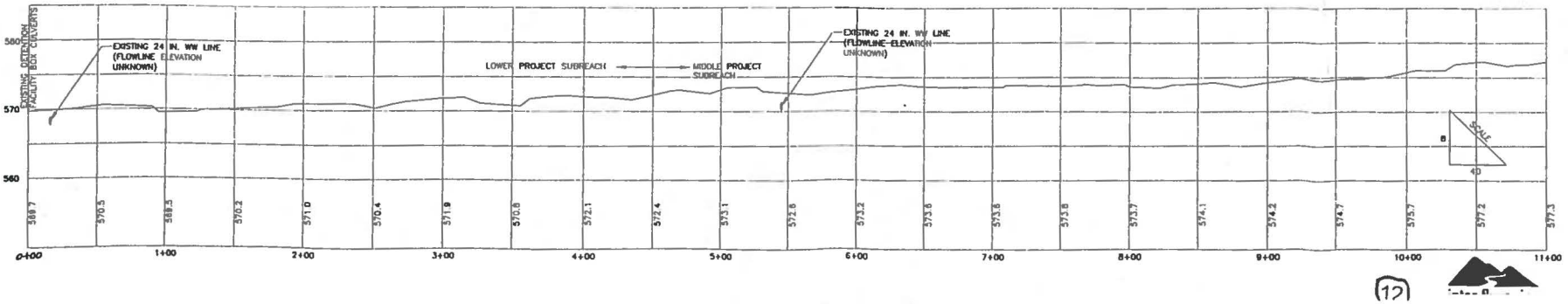

Pedestrian
Bridge
Upper Tannehill Branch
Proposed 24" WW Line


Pedestrian
Bridge


Manhole
Remove
Tree


Proposed 24" WW Line
Remove
Tree





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REV. NO.	BY	DATE	REVISION DESCRIPTION

PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSES OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL P. NEAL, JR. 68211 DECEMBER 2002
THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES

PRELIMINARY

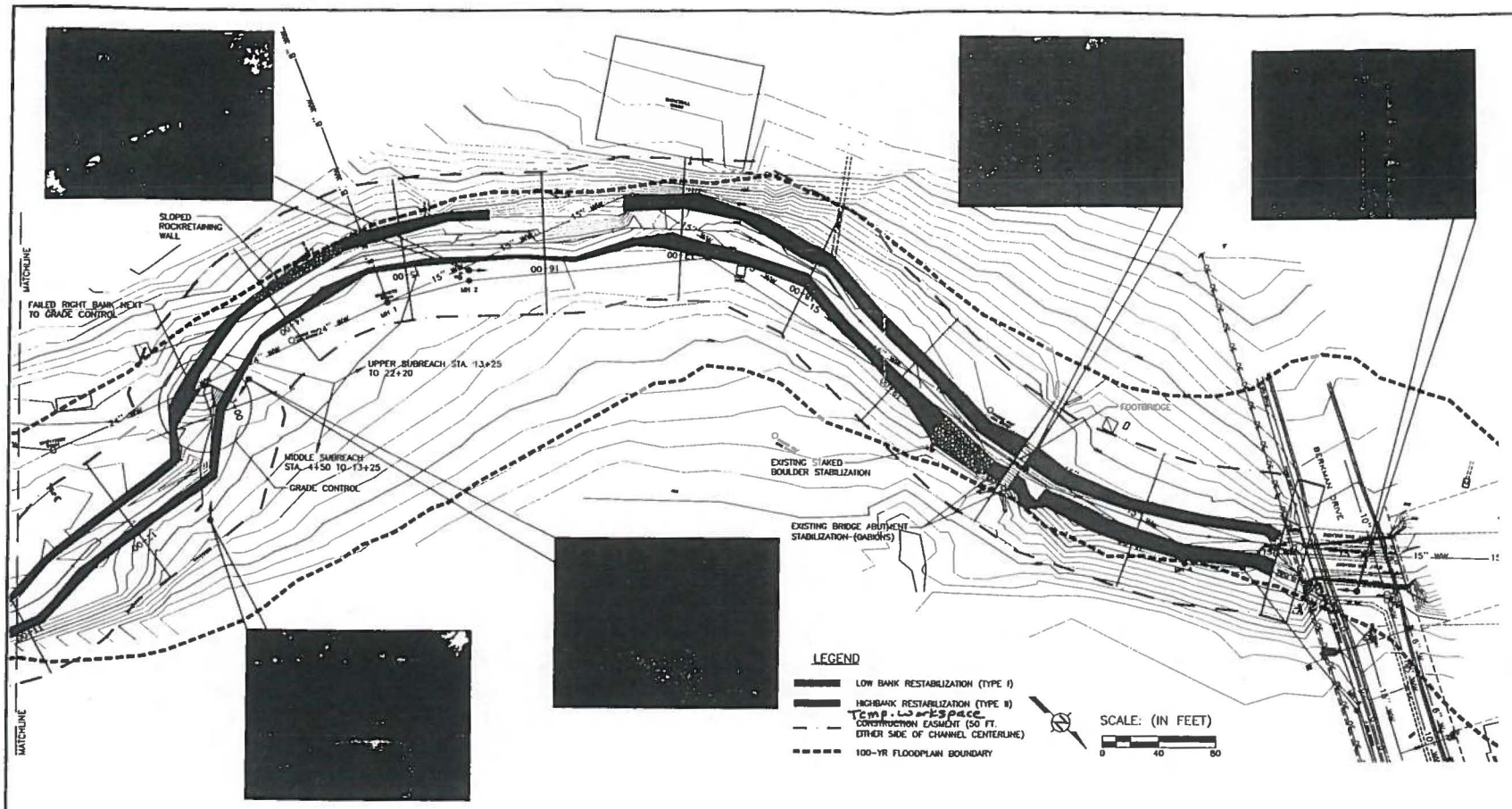
HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE, AUSTIN, TX 78753
PH. (512) 836-1848 FAX (512) 836-6499

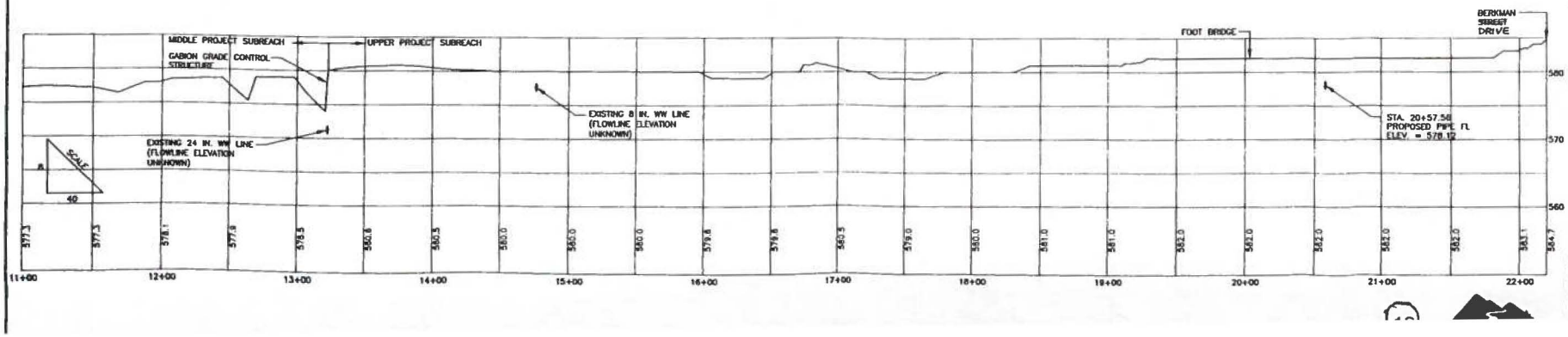
UPPER TANNEHILL - BROADMOOR & CAMERON WASTEWATER LINE REPLACEMENT

CONCEPTUAL STREAM RESTORATION
0+00 TO 11+00

acwp

NOTES	NAME	DATE
SURVEY BY	VARA	2003
DRAWN BY	REP	5/28/03
CHECKED BY	MR	-
DESIGNED BY	MR/GA	5/28/03
REVIEWED BY	GA	-
SCALE:		
CADD REF. NO.:		
CADD DIR.:		
SHEET	49	





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PRELIMINARY

HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE, AUSTIN, TX 78753
PH: (512) 836-1846 FAX (512) 836-8499

UPPER TANNEHILL - BROADMOOR & CAMERON WASTEWATER LINE REPLACEMENT

CONCEPTUAL STREAM RESTORATION
11+00 TO 22+20

acwp

NOTES	NAME	DATE
SURVEY BY	VARA	2003
DRAWN BY	REP	5/28/03
CHECKED BY	MR	-
DESIGNED BY	MR/GA	5/28/03
REVIEWED BY	GA	-
SCALE:		
CADD REF. NO.:		
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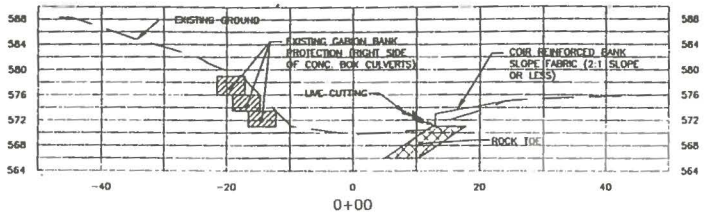

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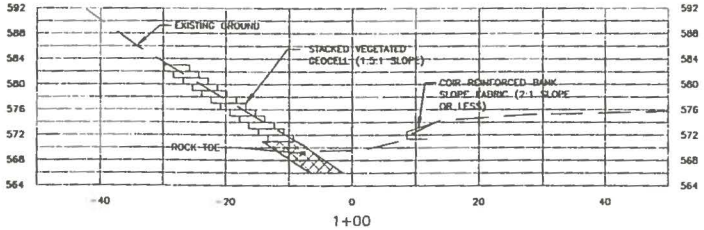

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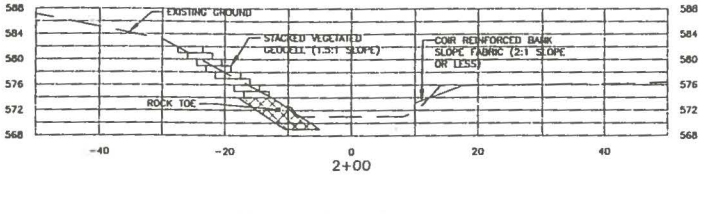

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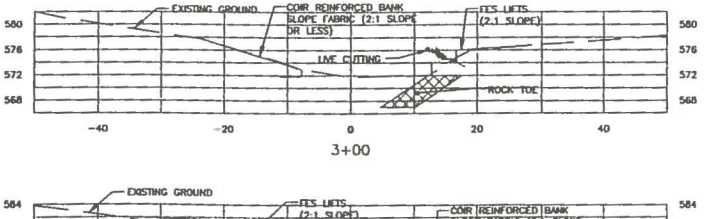

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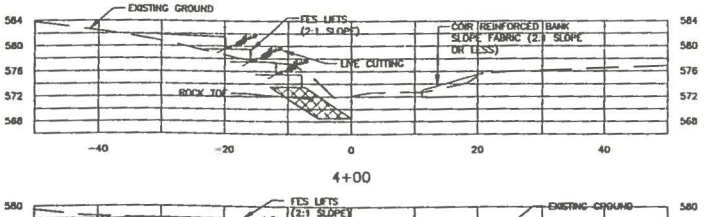

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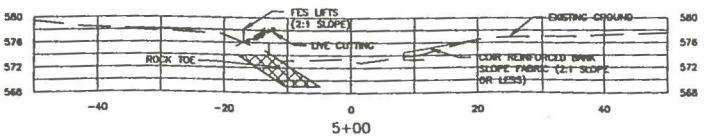

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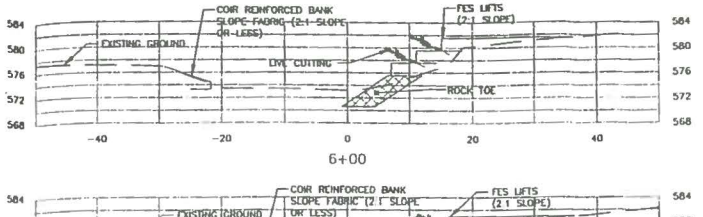

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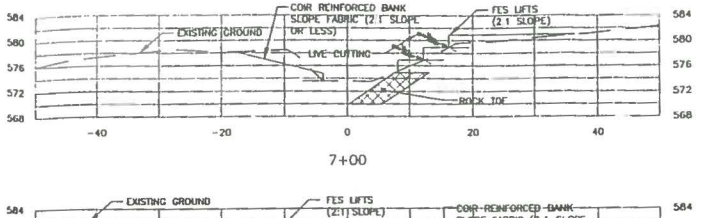

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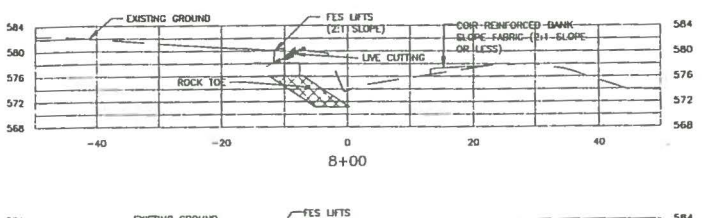

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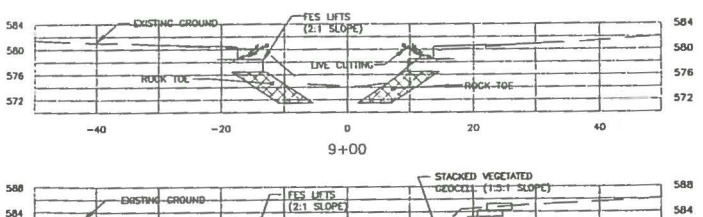

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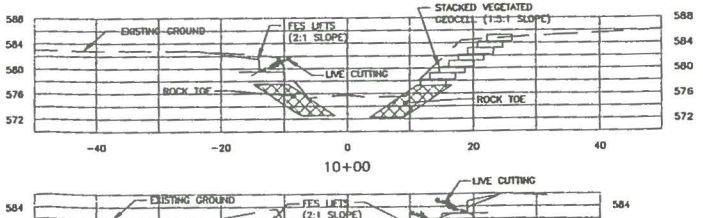

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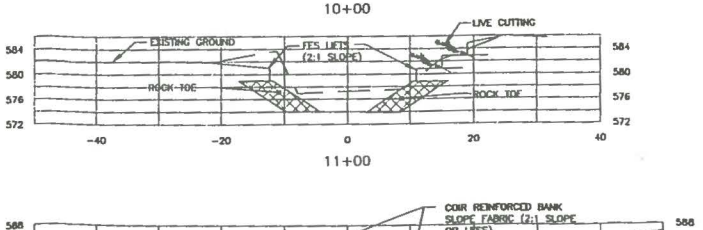

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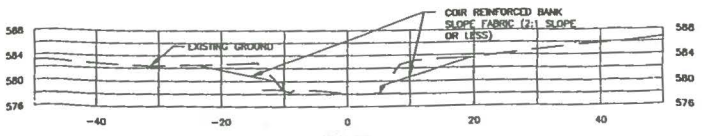

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HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE, AUSTIN, TX 78753
PH: (512) 836-1848 FAX: (512) 836-6499

UPPER TANNEHILL - BROADMOOR & CAMERON WASTEWATER LINE REPLACEMENT

EXISTING CROSS-SECTIONS 0+00 TO 12+00

acwp

NOTES	NAME	DATE
SURVEY BY	VARA	2003
DRAWN BY	REP	6/12/03
CHECKED BY	MR	-
DESIGNED BY	MR/GA	6/12/03
REVIEWED BY	GA	-
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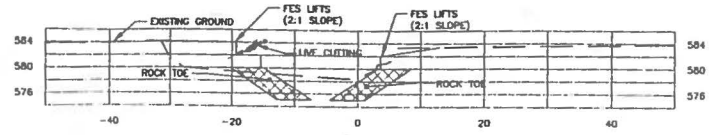
CADD REF. NO.:		
CADD DIR.: 13746		



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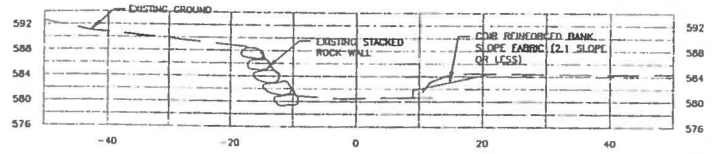

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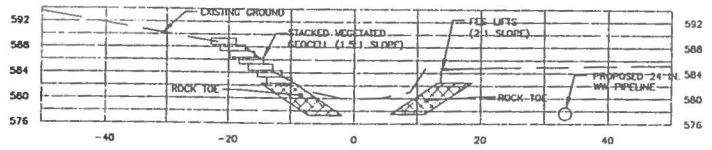

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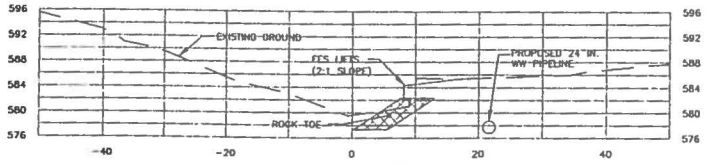

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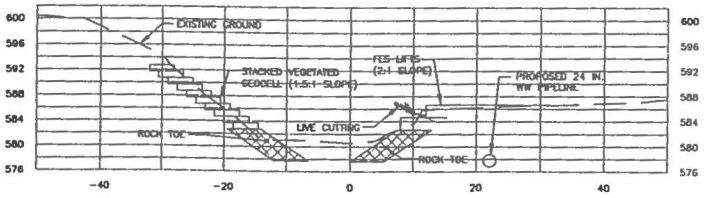

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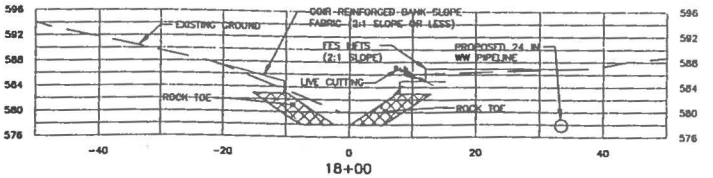

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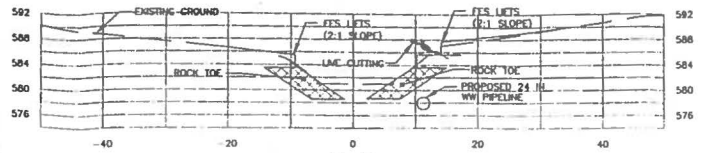

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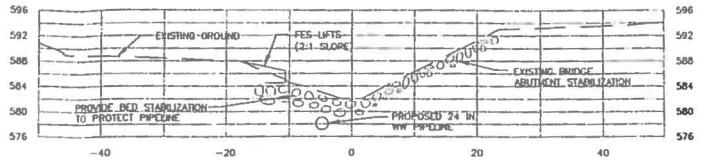

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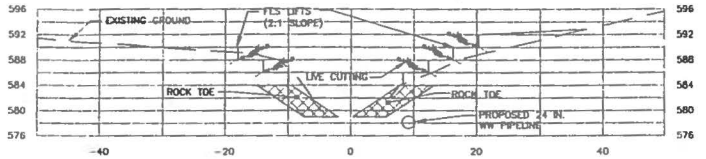

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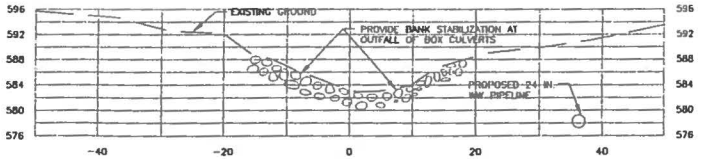

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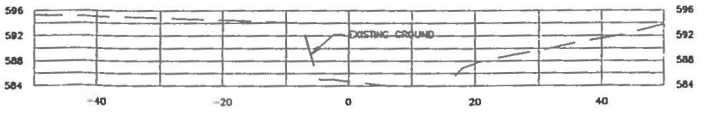


22+19.84

NO	REVISION DESCRIPTION	BY	DATE

PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSES OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL P. HEJL, JR 82211 DECEMBER 2002 THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES

PRELIMINARY

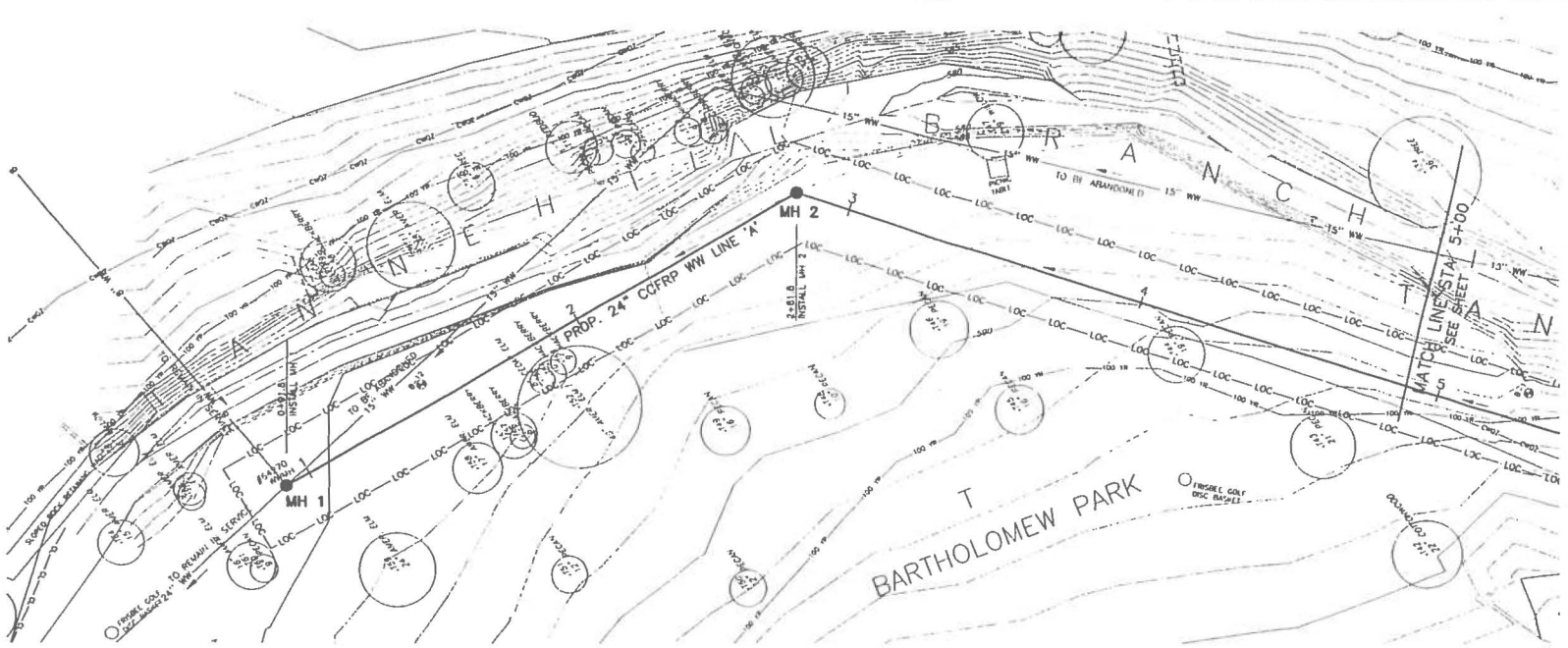
HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE, AUSTIN, TX 78753
PH. (512) 836-1848 FAX (512) 836-6499

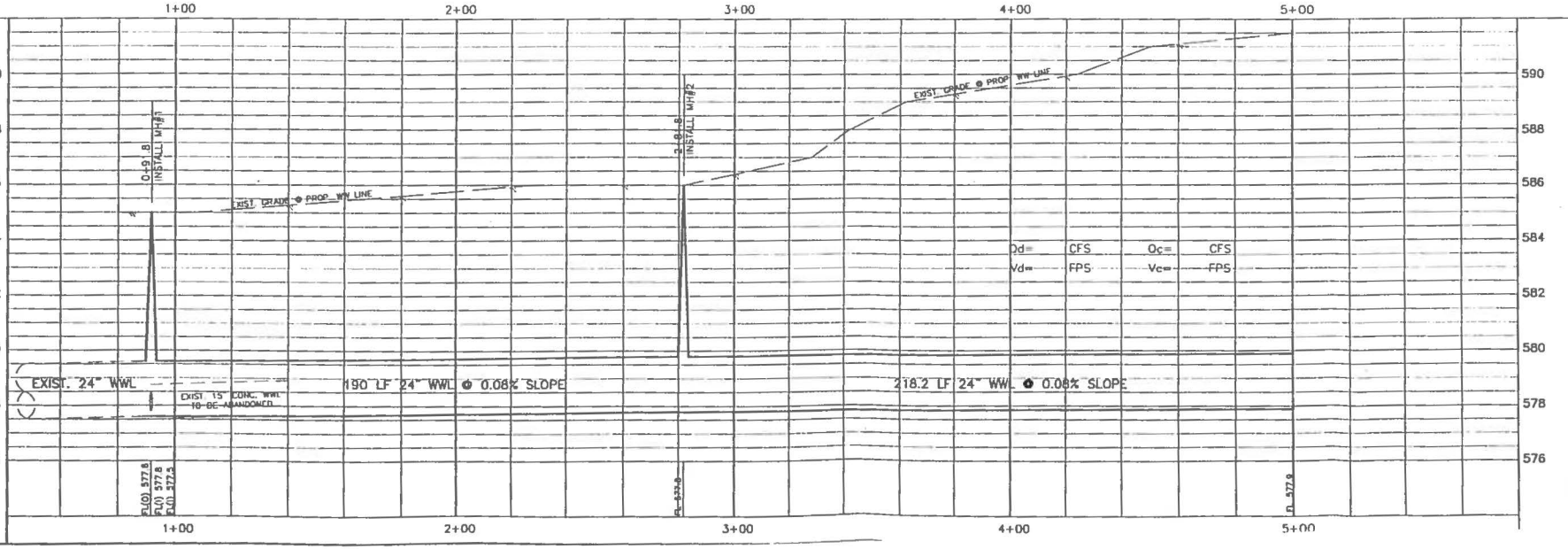
UPPER TANNEHILL - BROADMOOR & CAMERON WASTEWATER LINE REPLACEMENT

EXISTING CROSS-SECTIONS
13+00 TO 22+19.84

acwp

NOTES	NAME	DATE
SURVEY BY	VARA	2003
DRAWN BY	REP	6/12/03
CHECKED BY	MR	-
DESIGNED BY	MR/GA	6/12/03
REVIEWED BY	GA	-
SCALE: 1" = 10'		
CADD REF. NO.:		
CADD DIR.: 13746		





NO.	REVISION DESCRIPTION	DATE	BY

PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSES OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL P. HEIL, JR. 68211 JUNE 2003 THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES

PRELIMINARY

HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE, AUSTIN, TX 78753
PH. (512) 836-1846 FAX (512) 836-6499

UPPER TANNEHILL - BROADMOOR & CAMERON
WASTEWATER LINE REPLACEMENT

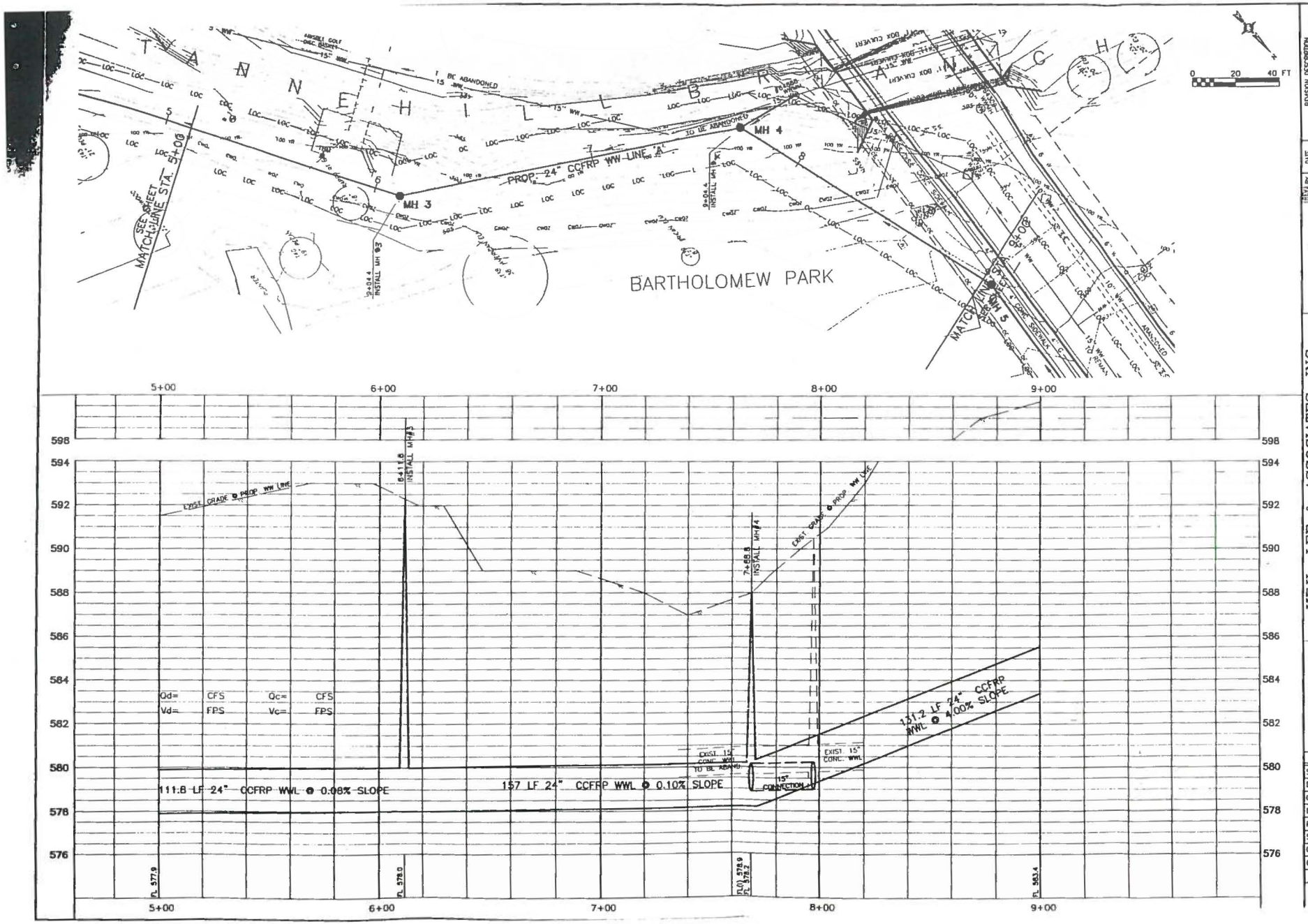
WASTEWATER LINE "A"
1+00 TO 5+00

60% SUBMITTAL

acwp

NOTES	NAME	DATE
SURVEY BY	VARA	2003
DRAWN BY	SDK	6/16/03
CHECKED BY	DPH	-
DESIGNED BY	SDK	6/16/03
REVIEWED BY	CL	-
SCALE: H.)1"=20' V.)1"=2'		
CADD REF. NO.: PP_DWG		
CADD DIR.: 13746		

SHEET NUMBER 17 OF



REVISION DESCRIPTION	DATE	BY

PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSES OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL P. HEJL, JR. 68211 JUNE 2003 THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES

PRELIMINARY

HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE, AUSTIN, TX 78745
PH. (512) 836-1948 FAX (512) 836-6499

UPPER TANNEHILL - BROADMOOR & CAMERON
WASTEWATER LINE REPLACEMENT

WASTEWATER LINE "A"
5+00 TO 9+00

60% SUBMITTAL

NOTES	NAME	DATE
SURVEY BY	VARA	2003
DRAWN BY	SDK	6/16/03
CHECKED BY	DPH	-
DESIGNED BY	SDK	6/16/03
REVIEWED BY	CL	-
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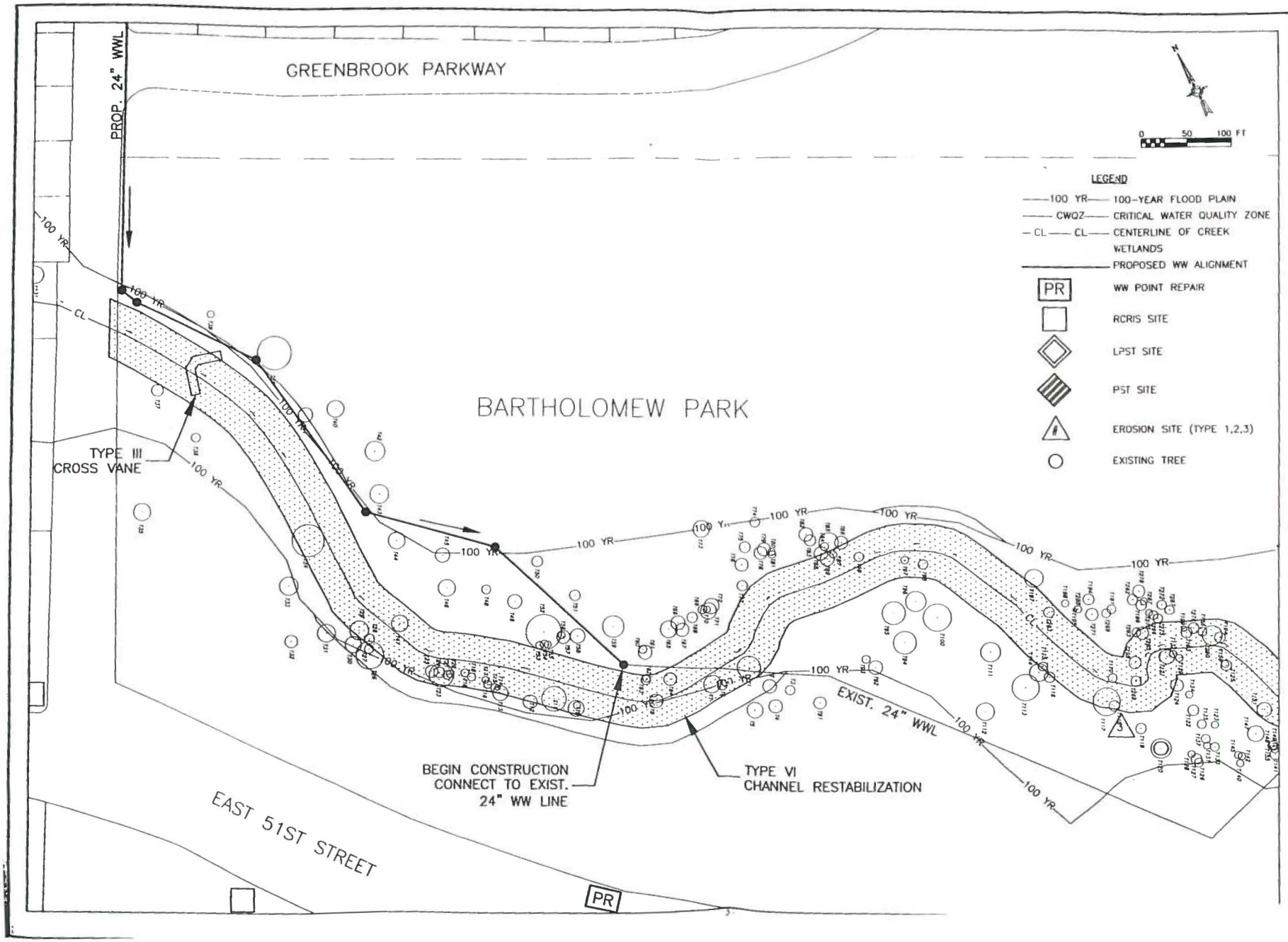
CADD REF. NO.: PP.DWG		
CADD DIR.: 13746		

SHEET NUMBER 20 OF —



REV NO	DATE	REVISION DESCRIPTION

PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSES OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL P. HEJL, JR 68711 DECEMBER 2003 THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES

PRELIMINARY

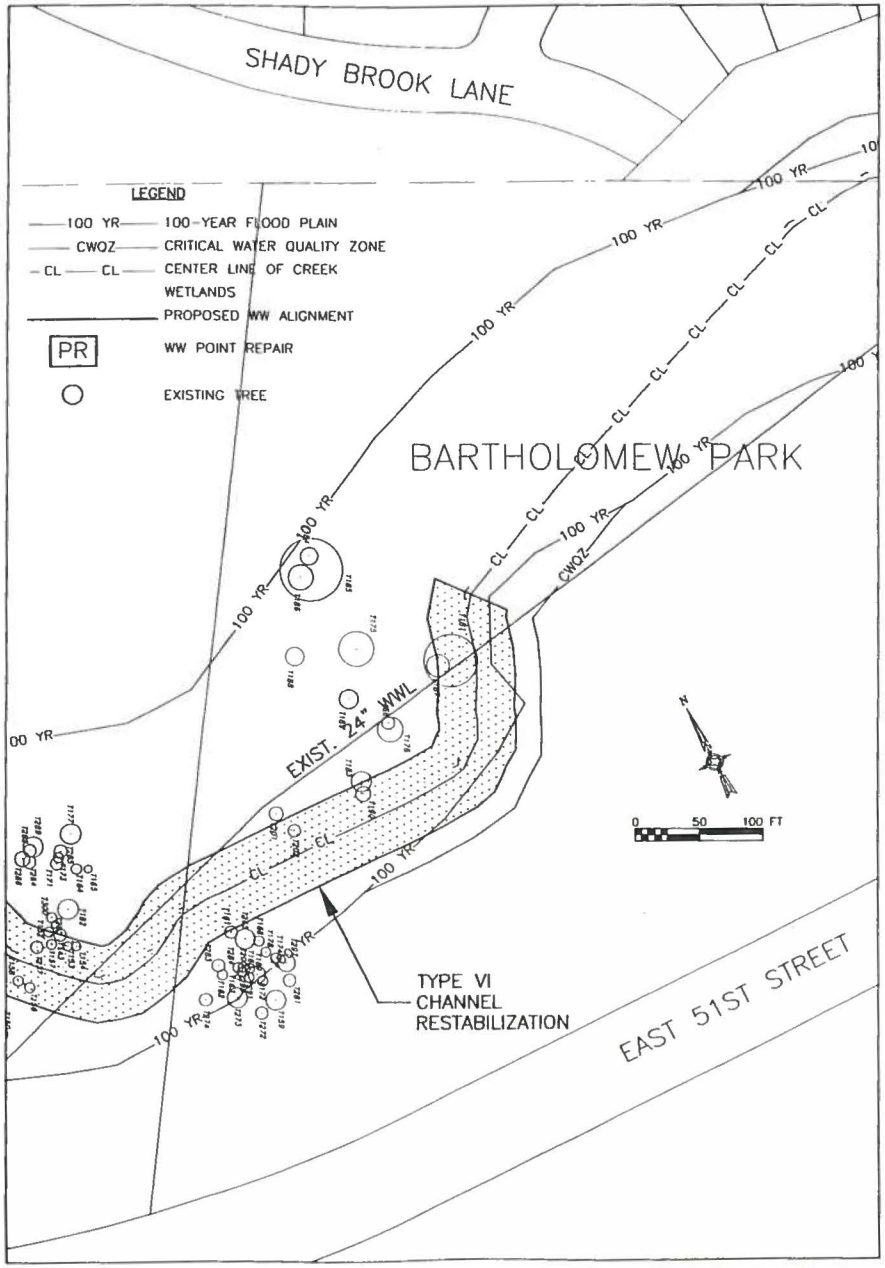
HEJL, LEE & ASSOCIATES, INC.
801 FARLEY DRIVE, AUSTIN, TX 78753
PH. (512) 836-1848 FAX (512) 836-8499

UPPER TANNEHILL - BROADMOOR & CAMERON
WASTEWATER LINE REPLACEMENT

ENVIRONMENTAL SHEETS

acwp

NOTES	NAME	DATE
SURVEY BY	AERIAL	1996
DRAWN BY	SDK	6/13/03
CHECKED BY	DPH	-
DESIGNED BY	SDK	-
REVIEWED BY	CL	-
SCALE: H.)1"=50' V.) N/A		
CADD REF. NO.: ENV.DWG		
CADD DIR.: 13746		



TREE TABLE

TREE TAG NO.	SIZE	DESCRIPTION
1	26.5"	Post Oak
2	15.5"	Cedar Elm
3	18.5"	Honey Locust
4	15.0"	Pecan
5	18.0"	Pecan
6	12.0"	Honey Locust
7	20.0"	American Elm
8	15.5"	Willow
9	18.0"	Hackberry
10		Pecan
11	28.0"	American Elm
12	15.5"	
13	17.0"	Redbud
14	6.0"	Pecan
15	9.5"	Pecan
16	9.0"	Pecan
17	7.5"	Pecan
18	9.0"	Chinaberry
19	9.0"	Chinaberry
20	21.0"	Chinaberry
21	10.0"	American Elm
22	8.5"	American Elm
23	27.0"	Cottonwood
24	12.0"	American Elm
25	14.0"	American Elm
26	31.0"	Chinaberry
27	10.0"	Chinaberry
28	11.0"	Chinaberry
29	21.5"	Hackberry
30	18.5"	Mulberry
31	20.0"	Chinaberry
32	14.0"	Hackberry
33	20.5"	Post Oak
34	36.0"	
35	19.0"	Sycamore
36	10.0"	Sycamore
37	13.0"	Honey Locust
38	38.0"	American Elm
39	8.0"	American Elm
40	19.0"	Pecan
41	17.5"	Crapemyrtle
42	22.0"	Cottonwood
43	21.0"	Pecan
44	18.5"	Pecan
45	16.0"	Pecan
46	19.0"	Pecan
47	18.5"	Willow
48	10.0"	Pecan
49	16.0"	Pecan
50	12.0"	Pecan
51	12.0"	Pecan
52	40.0"	American Elm
53	8.5"	Hackberry
54	9.5"	Hackberry
55	8.0"	Cedar Elm
56	8.0"	Hackberry
57	15.0"	Hackberry
58	18.5"	American Elm
59	24.0"	American Elm
60	9.0"	Pecan
61	15.5"	American Elm
62	9.0"	American Elm
63	10.5"	American Elm
64	14.5"	American Elm
65	18.0"	Pecan
66	15.5"	Hackberry
67	15.0"	American Elm
68	12.0"	American Elm
69	10.0"	American Elm
70	8.0"	American Elm
71	18.5"	American Elm
72	17.5"	American Elm
73	19.0"	Cottonwood
74	11.0"	Cedar Elm
75	12.0"	Cedar Elm
76	14.5"	Honey Locust
77	11.5"	Hackberry
78	14.5"	American Elm
79	14.5"	Hackberry
80	8.0"	Cedar Elm
81	8.5"	Hackberry
82	15.0"	Cedar Elm
83	12.5"	Hackberry
84	9.0"	Hackberry
85	21.5"	American Elm
86	14.5"	American Elm
87	8.0"	Cedar Elm
88	15.0"	American Elm
89	15.5"	American Elm
90	10.5"	Cedar Elm
91	13.5"	Pecan
92	15.5"	Cedar Elm
93	9.0"	Cedar Elm
94	25.5"	Cedar Elm
95	26.0"	Cedar Elm
96	22.5"	Cedar Elm
97	8.5"	Cedar Elm
98	10.5"	Cedar Elm
99	18.0"	Cedar Elm
100	31.0"	Cedar Elm
101	16.0"	Chinese Tallow
102	16.0"	Chinese Tallow
103	14.0"	Redbud
104	10.0"	Cedar
105	17.5"	Cedar
106	12.5"	Hackberry
107	8.0"	Hackberry
108	12.5"	Cedar
109	12.0"	Hackberry
110	18.0"	Cedar
111	22.0"	Cedar Elm
112	20.0"	Cedar Elm
113	30.0"	Post Oak

TREE TABLE

TREE TAG NO.	SIZE	DESCRIPTION
114	20.0"	Cedar Elm
115	10.0"	Cedar Elm
116	12.0"	Hackberry
117	32.0"	Post Oak
118	12.0"	Cedar
119	12.0"	Cedar Elm
120	22.0"	Cedar Elm
121	18.0"	Cedar Elm
122	12.0"	Cedar
123	8.0"	Cedar Elm
124	14.0"	Cedar Elm
125	12.0"	Cedar Elm
126	10.0"	Cedar Elm
127	12.0"	Cedar Elm
128	8.0"	Cedar Elm
129	8.0"	Cedar Elm
130	20.0"	Cedar Elm
131	8.0"	Cedar Elm
132	8.0"	Pecan
133	10.0"	Cedar Elm
134	8.0"	Cedar Elm
135	10.0"	Cedar Elm
136	8.0"	Cedar Elm
137	10.0"	Cedar Elm
138	20.0"	Cedar Elm
139	22.0"	Cedar Elm
140	8.0"	Hackberry
141	12.0"	Cedar
142	8.0"	Cedar Elm
143	10.0"	Cedar Elm
144	12.0"	Cedar Elm
145	8.0"	Live Oak
146	12.0"	Cedar Elm
147	18.0"	Cedar Elm
148	10.0"	Cedar
149	10.0"	Cedar
150	8.0"	Cedar
151	16.0"	Hackberry
152	8.0"	Cedar Elm
153	7.0"	Cedar Elm
154	7.0"	Cedar Elm
155	8.0"	Cedar
156	8.0"	Hackberry
157	8.0"	Cedar Elm
158	8.0"	Cedar Elm
159	16.0"	Cedar Elm
160	8.0"	Cedar Elm
161	10.0"	Cedar Elm
162	8.0"	Cedar Elm
163		
164	8.0"	Cedar Elm
165	8.0"	Cedar Elm
166	10.0"	Water Oak
167		
168	8.0"	Cedar Elm
169	14.0"	Cedar Elm
170	10.0"	Cedar Elm
171	10.0"	Cedar Elm
172	8.0"	Cedar Elm
173	8.0"	Cedar Elm
174	8.0"	Cedar Elm
175	28.0"	Hackberry
176	20.0"	Hackberry
177	16.0"	Cedar Elm
178	8.0"	Cedar Elm
179		
180	12.0"	Hackberry
181	42.0"	Willow
182	8.0"	Water Oak
183	16.0"	Ligustrum
184	14.0"	Bois d'Arc
185	50.0"	Cottonwood
186	20.0"	Cedar Elm
187	18.0"	Cedar Elm
188	2 - 15.0"	Hackberry
189	15.0"	Live Oak
190	12.0"	Live Oak
191	10.0"	Hackberry
192	16.0"	Hackberry
193	12.0"	Hackberry
194	12.0"	Hackberry
195		
196	12.0"	Cedar Elm
197	20.0"	Cedar Elm
198	8.0"	Cedar Elm
199	8.0"	Cedar Elm
200	8.0"	Cedar Elm
201	11.0"	Hackberry
202	10.0"	Chinese Tallow
203	10.0"	Pecan
204	12.0"	Pecan
205	8.0"	Pecan
206	12.0"	Hackberry
207	12.0"	Pecan
208	10.0"	Cottonwood
209	30.0"	Oak
210	20.0"	Oak
211	24.0"	Oak
212	18.0"	Oak
213	36.0"	Oak
214	30.0"	Elm
215	24.0"	Pecan
216	24.0"	Pecan
217	28.0"	Pecan
218	18.0"	Pecan
219	12.0"	Hackberry
220	24.0"	Cluster
221	28.0"	Cluster
222	12.0"	Mulberry
223	18.0"	Hackberry
224	20.0"	Oak
225	22.0"	Pecan
226	18.0"	Chinese Tallow

TREE TABLE

TREE TAG NO.	SIZE	DESCRIPTION
227	24.0"	Chinese Tallow
228	12.0"	Pine
229	36.0"	Oak
230	30.0"	Oak
231	20.0"	Elm
232	20.0"	Elm
233	8.0"	Oak
234	12.0"	Maple
235	36.0"	Maple
236	20.0"	Maple
237	24.0"	Elm
238	8.0"	Post Oak
239	12.0"	Double
240	18.0"	Elm
241	8.0"	Post Oak
242	12.0"	Post Oak
243	18.0"	Elm
244	24.0"	Pecan
245	10.0"	Hackberry
246	48.0"	Elm
247	36.0"	Pecan
248	24.0"	Pecan
249	24.0"	Pecan
250	36.0"	Pecan
251	12.0"	Pecan
252	18.0"	Pecan
253	18.0"	Pecan
254	12.0"	Pecan
255	10.0"	Pecan
256	16.0"	Pecan
257	24.0"	Pecan
258	12.0"	Pecan
259		
260		
261		
262	12.0"	Cedar Elm
263	12.0"	Hackberry
264	10.0"	Cedar Elm
265	18.0"	Cedar Elm
266	12.0"	Hackberry
267	10.0"	Cedar Elm
268	12.0"	Mulberry
269	10.0"	Cedar Elm
270	8.0"	Cedar Elm
271	14.0"	Cedar Elm
272	10.0"	Cedar Elm
273	18.0"	Honey Locust
274	10.0"	Cedar Elm Elm
275	10.0"	Hackberry
276	18.0"	Honey Locust
277	10.0"	Cedar Elm
278	14.0"	Cedar Elm
279	12.0"	Hackberry
280	8.0"	Cedar Elm
281	10.0"	Cedar Elm
282	10.0"	Cedar Elm
283	10.0"	Cedar Elm
284	8.0"	Cedar Elm
285	10.0"	Cedar Elm
286	12.0"	Cedar Elm
287	8.0"	Cedar Elm
288	8.0"	Hackberry
289	16.0"	Cedar Elm
290	22.0"	Mulberry
291	8.0"	Cedar Elm
292	18.0"	Mulberry
293	10.0"	Hackberry
294	14.0"	Cedar Elm
295	14.0"	Hackberry
296	10.0"	Cedar Elm
297	14.0"	Cedar Elm
298	14.0"	Pecan
299	8.0"	Cedar Elm
300	8.0"	Cedar Elm
301	24.0"	Hackberry
302	8.0"	Elm
303	8.0"	Hackberry
304	12.0"	Oak
305	10.0"	Pecan
306	30.0"	Elm
308	8.0"	Hackberry
309	8.0"	Hackberry
310	12.0"	Hackberry
311	8.0"	Elm
312	20.0"	Elm
313	30.0"	Oak
316	10.0"	Hackberry
317	20.0"	Hackberry
318	24.0"	Hackberry
319	16.0"	Hackberry
320	18.0"	Elm
321	30.0"	Elm
322	24.0"	Post Oak
323	20.0"	Post Oak
324	20.0"	Post Oak
325	10.0"	Hackberry
326	18.0"	Oak
327	18.0"	Post Oak
328	12.0"	Oak
329	10.0"	Oak
330	14.0"	Post Oak
331	10.0"	Post Oak
332	10.0"	Post Oak
333	18.0"	Hackberry
334	20.0"	Hackberry
335	18.0"	Hackberry
336	10.0"	Hackberry
337	10.0"	Hackberry
338	10.0"	Hackberry
399	18.0"	Hackberry
400	20.0"	Hackberry

19 (End)

REVISION NO.	BY	DATE	REVISION DESCRIPTION

PRELIMINARY

THIS DOCUMENT IS RELEASED FOR THE PURPOSES OF INTERIM REVIEW UNDER THE AUTHORITY OF DANIEL P. HEJL, JR 68211 DECEMBER 2002 THIS DOCUMENT IS NOT INTENDED FOR BIDDING, PERMITTING AND/OR CONSTRUCTION PURPOSES

PRELIMINARY

HEJL, LEE & ASSOCIATES, INC.
601 FARLEY DRIVE AUSTIN, TX 78753
PH. (512) 836-1845 FAX (512) 836-6499

UPPER TANNEHILL - BROADMOOR & CAMERON WASTEWATER LINE REPLACEMENT

ENVIRONMENTAL SHEETS

acwp

NOTES	NAME	DATE
SURVEY BY	AERIAL	1996
DRAWN BY	SDK	6/13/03
CHECKED BY	DPH	-
DESIGNED BY	SDK	-
REVIEWED BY	CL	-

SCALE: H.1"=50' V.) N/A
CADD REF. NO.: ENV.DWG
CADD DIR.: 13746

SHEET NUMBER 14 OF 19

#4

MEMORANDUM

TO: Jesus Olivares, Director
Parks and Recreation Department

FROM: Peter Rieck, Director
Department of Public Works

DATE: July 15, 2003

SUBJECT: Request for Use Agreement Across Parkland
Shoal Creek WW Improvements, 25th St to 34th St
CIP No. 4570-237-8583 and -8584; eCapris 4926.036 and .037

The Department of Public Works, on behalf of the Water and Wastewater Utility, hereby requests a permanent and temporary use agreement for the construction, operation and maintenance of the proposed 66-inch wastewater tunnel, CIP No. 4570-237-8584 (29th St to 34th St); and for several WW repair and improvements, CIP 4570-237-8583 (Churchill/33rd; Seton/34th; 8-inch on west bank south of 29th St). Attached are the following documents for your use and consideration to support this request:

A. General Location Map,
B. Information Packet,
C. Tree Survey, and
D. Field Note descriptions.

From these documents, you will note that the permanent use portion of the proposed agreement contains a total of 1.77 acres for permanent wastewater easement and 3.93 acres for the temporary easements.

The wastewater tunnel project includes construction of approximately 3,100 linear feet of 66-inch diameter wastewater pipe in a tunnel, and related appurtenances, to be installed under the general alignment of Shoal Creek, from south of the 29th St bridge to north of West 34th St. About half of the tunnel will be built under private property between these two park locations. Impact to Shoal Creek Park will be limited to the temporary work sites needed to construct the tunnel. These locations are the main shaft site south of 29th St, and the exit shaft site north of 34th Street. There is a second scope of related wastewater work near 34th Street that will create short periods of impact in parkland and it consists of several small areas of work needed to connect local sewage lines to the tunnel. Those small areas result from replacement of sewer lines in the 33rd St, Kerbey Lane, 32nd St, Churchill area by open cut, which includes a short piece in parkland that also requires temp access. And installation of new open cut sewer line in 34th St and Shoal Creek Blvd to provide new wastewater service for Seton Hospital, which will require a small area of line work in parkland and a small staging area. The third scope of work that will impact Shoal Creek park is replacement of an exposed 8-inch line on west bank of Shoal Creek, south of

29th St, with a new 8-inch to be installed by open cut line in the alignment of the west bank hike/bike trail.

The project design and bid documents were prepared by Weston Solutions, as part of the Austin Clean Water Program (ACWP). The proposed routing is shown on the General Location Map. The affected parkland is within the 100-year floodplain of Shoal Creek.

Public Works, in cooperation with the Utility, PARD, WPDRD and others, have agreed that the proposed alignment is the most feasible and prudent alternative for installing these needed WW improvements. All reasonable planning efforts have been taken to minimize harm to the area. All construction and site restoration for the project will be completed in accordance with the ACWP Design Manual and *Standard Specifications and Construction Standards* of the City of Austin. All construction and site restoration for that portion, of the project within parkland, will also be completed in accordance with PARD's *Construction in Parks Specifications*.

We request that the necessary documentation be prepared for consideration of this request by the Parks and Recreation Board. We have already presented this information to the Land and Facilities Committee and they accepted the plans for restoration and mitigation. We plan to make a presentation to the Parks and Recreation Board at their July meeting to seek their concurrence with the requested land use agreement.

If you have any questions or need any additional information, please feel free to contact Mr. Stan Evans, P.E. (Public Works), who is assigned to the ACWP staff at phone number 479-1636.

Peter Rieck, Director
Department of Public Works

Attachments

CC: Gopal Guthikonda w/attachments
Stuart Strong w/attachments
Bill Moriarty, ACWP/Earthtech, w/attachments
Pete Vujasin, ACWP/Earthtech, w/attachments
Junie Plummer w/attachments
Stan Evans w/attachments
file

Information Packet

Shoal Creek Wastewater Improvements
to serve the
SHOAL CREEK WASTEWATER COLLECTION SYSTEM

CIP No. 4570-37-8583 and -8584
eCapris 4926.036 and 4926.037

City of Austin
Department of Public Works
and
Austin Clean Water Program

on behalf of the
Water and Wastewater Utility

INTRODUCTION

The Department of Public Works, on behalf of the Water and Wastewater Utility, is proposing to construct a 66-inch diameter wastewater tunnel and appurtenances to serve the lower end of the Shoal Creek basin wastewater collection system. The proposed tunnel will replace the existing 54-inch Shoal Creek Interceptor that has been exposed by erosion. In conjunction with this project, Public Works is requesting authorization to build a portion of the Wastewater Line in the Shoal Creek Park along Shoal Creek in the area of 29th St near Lamar Blvd and in the area of 34th St. This authorization will require action by the City pursuant to Chapter 26 of the Texas Parks and Wildlife Code.

The proposed wastewater work within parkland consists of the construction of a main work shaft adjacent to 29th St bridge and an exit shaft north of West 34th St. and a 66-inch gravity wastewater line in a tunnel between the shafts along with related appurtenances to tie-in local wastewater services. Between these two areas of parkland, the tunnel will be installed below private properties. In addition to the permanent underground easements for the tunnel, temporary work space easements are requested for the construction of the shafts and the associated work areas.

PROJECT NEED AND JUSTIFICATION

The Austin Clean Water Program (ACWP) was developed to provide wasterwater system improvements needed to overcome system overflows related to deteriorated infrastructure and excessive flows resulting from rainwater infiltration. The US EPA placed an Administrative Order on the City of Austin to eliminate overflows. The wastewater collection system that serves the northern part of the City drains to the Crosstown Tunnel and the overflows for this entire area are to be remedied by September 2005.

In 2002, the City of Austin selected the engineering firm of Weston Solutions to design the improvements to replace the exposed and at-risk 54-inch Shoal Creek Interceptor, which lies in the creek in this reach. In November, 2002, Weston was directed to prepare a Technical Memo Report to evaluate feasibility of protecting the existing line or replacing it with a wastewater tunnel.

The engineer recommended a 96-inch diameter tunnel under Shoal Creek with a 66-inch wastewater pipe. The southern end of the tunnel will be in parkland, adjacent to the 29th St bridge, where a work shaft will be established. Upon completion of the new line in the tunnel, only an access manhole will remain at the shaft site. There will also be underground appurtenances to deliver wastewater flow from the Shoal Creek basin to the existing Crosstown Wastewater Tunnel. There will be another shaft at the north end of the tunnel, north of the W. 34th St bridge, which is also in parkland. There will be a junction box and other underground appurtenances at this location to direct flow from existing 54-inch and 24-inch wastewater interceptors into the new tunnel. This will allow the Utility to decommission the downstream portions of these lines. A length of tunnel and other miscellaneous underground wastewater connections will occur on parkland at the southern and northern portions, while the middle part of the proposed tunnel will be constructed under private properties. We are requesting permanent underground and surface easements for these improvements that occur within parkland, along with temporary work space easements.

The remainder of the proposed wastewater improvements in Shoal Creek Park near 34th St require small, isolated easements to allow connection of local wastewater collection systems to the tunnel. These locations will be installed by underground drilling method which requires an open pit, that will then be backfilled and the vegetation replaced. Another area on the west bank of Shoal Creek, south of 29th St will require an easement along the existing trail for installation of an 8-inch wastewater line.

ALTERNATIVES TO THE USE OF PARKLAND

The feasibility report evaluated three alternative routes for the proposed wastewater tunnel. Only the proposed route was able to avoid the tunnel going under private and public structures. All of the routes had portions that must be in parkland due to the need to intercept existing wastewater lines at the north area by 34th St and reconnect to downstream lines at the south area by 29th St and by Shoal Creek Blvd at Lamar.

PROJECT DESCRIPTION AND SCHEDULE

The wastewater line project will include the construction of approximately 3,100 linear feet of 66-inch diameter wastewater interceptor and related appurtenances in the general area of Shoal Creek, from south of 29th St bridge to north of 34th St bridge. The project routing, design and bid documents were prepared by Weston Solutions, as part of the Austin Clean Water Program (ACWP). The proposed routing is shown on the General Location Map. The entire length will be tunnel, with miscellaneous work areas constructed by open cut and underground drilling to provide connection of existing WW lines to the tunnel. The affected parkland is within the 100-year floodplain of Shoal Creek, except for the shaft location adjacent to 29th St bridge.

The proposed tunnel will require a work shaft and work space/staging area to be located within the parkland adjacent to 29th St and 34th St. The major surface activity for the tunnel will occur at the work shafts, including storage of spoil material, load-out of spoil to haul trucks, storage of pipe, and field offices for the contractor. The temporary work space easements for all of the several scopes will total about 3.93 acres. The wastewater tunnel will require a 10' wide permanent underground wastewater easement.

The several projects in Shoal Creek Park have an anticipated construction cost of $8,000,000. Bidding is scheduled in the fall of 2003 with work to begin early in 2004 and work will end about September 2005.

SHORT TERM EFFECTS OF CONSTRUCTION

Short-term effects during construction will be rerouting of some trails and damage to limited portions of trail improvements. The construction will not interfere with any other park functions. Disturbance of the area within the permanent and temporary use agreement will include preconstruction clearing, trenching, pipe installation, temporary spoil and material storage, heavy vehicle tracking and soil compaction. Damaged improvements will be replaced and areas of disturbance will be revegetated. Few trees, if any, will be impacted within the areas covered by the use agreement. There will be one area of creekbank disturbance north of 34th St, but no riparian disturbance is expected.

LONG TERM EFFECTS OF CONSTRUCTION

The only long-term effects to the parkland as a result of the proposed construction, operation and maintenance of the wastewater line will be the restriction of building structures or similar improvement within the limited areas of the permanent use agreement (total area is only1.77 acres). Building restriction is also consistent with the restrictions now placed on those portions of the wastewater line that are within the 100-year floodplain of Shoal Creek; therefore, no long-term effects due to the project are anticipated. Construction of the proposed wastewater facilities will remove potential pollution of the creek by correcting recurring and potential sewage overflows, and will therefore improve the public health. These contracts will also provide improvements to parkland trails and two ADA creek crossings. In the future, removal of sewage flows from the existing lines in the creek will allow removal of the lines and the unsightly concrete caps for about 1500 LF in the reach south of 29th St.

RESTORATION PLAN

All disturbed land will be restored and revegetated to a condition equal to or better than that which existed prior to construction. Areas used for roadways, parking, etc., will first be tilled in order to remove any vehicle tracks and to loosen compacted soil prior to the preparation of the ground for revegetation. It is anticipated that the entire permanent and temporary use agreement area at 29th St and at 34th St will require such treatment, but the majority of tunnel and appurtenances will not require such treatment, since they are underground.

Just south of 34th St bridge, where this work needs access along trails, we will reconstruct limited areas where erosion has undermined paved trails, and a creek crossing will be constructed as part of the mitigation package.

The trail south of 29th St (that will be impacted for installation of the 8-inch wastewater line) will be reconstructed with an improved surface, consisting of about 2000 LF of new trail, plus a proposed creek crossing will be constructed as part of the mitigation package. In addition, about 30 LF of streambank stabilization will be constructed adjacent to Shoal Creek Blvd at Lamar where the trail is very close to the creek flows.

A detailed tree survey and evaluation were performed by the engineer and is attached hereto. That survey determined that only a few trees will be affected by the construction. The project will include replacement planting or payment for those trees in accordance with PARD's *Construction in Parks Specifications*.

All site restoration will be completed in accordance with the *Standard Specifications and Construction Standards* of the City of Austin. All construction and site restoration for that portion of the project within parkland will also be completed in accordance with PARD's *Construction in Parks Specifications.*

As with all City construction projects, the Contractor will be required to provide a one-year warranty of his work including such restoration, revegetation and tree replacement.

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

TREE LIST (Tag, Size & Description)	
2	10" 10" CEDAR ELM
3	12" CEDAR ELM
4	20" CEDAR ELM
5	9" LIVE OAK
6	19" CEDAR ELM
7	14" CHINESE TALLOW
8	8" 3" CEDAR ELM
9	14" CHINESE TALLOW
10	4" HACKBERRY
11	13" 4" CEDAR ELM
12	13" COTTONWOOD
13	10" CHINESE TALLOW
14	13" 6" CHINESE TALLOW
15	16" CEDAR ELM
16	14" CEDAR ELM
17	17" 7" 7" LIVE OAK
18	18" HACKBERRY
19	32" CHINESE TALLOW
20	17" PECAN
21	17" LIVE OAK
22	16" COTTONWOOD
23	12" COTTONWOOD
24	24" HACKBERRY
25	25" HACKBERRY
26	12" PECAN
27	17" CHINABERRY
28	11" CEDAR ELM
29	9" CEDAR ELM
30	10" CEDAR ELM
31	18" 8" PECAN
32	8" 4" WILLOW
33	10" SPANISH OAK
34	9" SPANISH OAK
35	8" SPANISH OAK
36	11" SPANISH OAK
37	8" CEDAR ELM
38	15" PECAN
39	10" PECAN
40	11" CEDAR ELM
41	8" LIVE OAK
42	7" SPANISH OAK
43	18" 7" 7" 7"
44	13" PECAN
45	30" PECAN
46	18" LIVE OAK
47	7" PECAN
48	26" LIVE OAK
49	26" LIVE OAK

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

50 8" SPANISH OAK
51 8" SPANISH OAK
52 8" 4" HACKBERRY
53 14" PECAN
54 15" CEDAR ELM
55 20" CEDAR ELM
56 5" CHINESE TALLOW
57 4" CHINESE TALLOW
58 6" CHINESE TALLOW
59 4" CHINABERRY
60 6" 4" CHINABERRY
61 4" 4" 4" CHINABERRY
62 5" 4" MIMOSA
63 4" 4" WILLOW
64 10" AMERICAN ELM
65 12" 6" AMERICAN ELM
66 4" AMERICAN ELM
67 5" PECAN
68 5" HACKBERRY - TO BE REMOVED
69 4" ASH
70 8" 5" 4" AMERICAN ELM - TO BE REMOVED
71 6" 6" 5" CEDAR ELM - TO BE REMOVED
72 12" CEDAR ELM
73 6" HACKBERRY
74 10" CEDAR ELM
75 9" CEDAR ELM
76 6" HACKBERRY
77 7" CEDAR ELM
78 7" LIVE OAK
79 12" CEDAR ELM
80 9" CEDAR ELM
81 13" PECAN
82 12" PECAN
83 13" CEDAR ELM
84 10"CEDAR ELM
85 6" CEDAR ELM
86 4" CEDAR ELM
87 10" CEDAR ELM
88 11" CEDAR ELM
89 10" CEDAR ELM
90 9" CHINABERRY
91 9" CEDAR ELM
92 12" CEDAR ELM
93 12" 4" CEDAR ELM
94 5" ELM
96 5" CEDAR ELM
97 7" HACKBERRY
98 21" SPANISH OAK
99 13" PECAN

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

100	18" CEDAR ELM
101	7" ASH
102	12" CEDAR ELM
103	7" CEDAR ELM
104	7" CEDAR ELM
105	17" CEDAR ELM
106	8" PECAN
107	16" PECAN
108	9" HACKBERRY
109	17" 6" 2"
110	5" 4" CEDAR ELM
111	13" CEDAR ELM
112	16" CEDAR ELM
113	10" 4" ELM
114	7" PECAN
115	14" CEDAR ELM
116	13" 12" CEDAR ELM
117	12" CEDAR ELM
118	10" PECAN
119	12" CEDAR ELM
120	12" PECAN
121	31" CEDAR
122	15" HACKBERRY
123	14" CEDAR ELM
124	15" PECAN
125	13" ELM
126	7" CEDAR
127	20" ELM
128	15" CHINABERRY
129	17" ELM
130	30" COTTONWOOD
131	12" 4" ASH
132	12" ELM
133	9" PECAN
134	10" CEDAR ELM
135	9" PECAN
136	7" PECAN
138	6" ASH
139	14" CHINABERRY
140	15" CEDAR ELM
141	6" ASH
142	8" ELM
143	14' PECAN
144	32" COTTONWOOD
145	21" CEDAR
146	24" ELM
147	15" ELM
149	12" WILLOW
150	14" CEDAR ELM

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

151 15" BOXELDER ASH
152 11" WILLOW
153 12" WILLOW
154 12" WILLOW
155 11" WILLOW
156 7" ASH
157 6" ASH
158 6" ASH
159 10" WILLOW
160 7" ASH
161 7" 3" ASH
162 12" WILLOW
163 14" WILLOW
164 7" CHINESE TALLOW
165 6" CEDAR ELM
166 5" OAK
167 7" CHINQUAPIN OAK
168 8" 7" 7" 6" CHINQUAPIN OAK
169 7" 4" CHINABERRY
170 12" COTTONWOOD
171 13" CHINABERRY
172 6" CHINESE TALLOW
173 6" CHINESE TALLOW
174 6" CHINESE TALLOW
175 5" ASH
176 21" CEDAR ELM
177 6" 5" 4" ASH
178 6" CHINABERRY
179 6" CHINABERRY
180 12" ELM
181 6" HACKBERRY
182 16" LIVE OAK
183 6" CEDAR ELM
184 8" CEDAR ELM
185 10" ASH
186 11" WILLOW
187 8" CHINESE TALLOW
188 10" WILLOW
189 22" WILLOW
190 14" HACKBERRY
191 9" CEDAR ELM
192 6" HACKBERRY
193 14" HACKBERRY
194 15" WILLOW
195 25" HACKBERRY
196 8" 8" HACKBERRY
197 12" CEDAR ELM
198 13" CEDAR ELM
199 10" CEDAR ELM

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

200 11" CEDAR ELM
201 12" HACKBERRY
202 10" ELM
203 7" HACKBERRY
204 16" CEDAR ELM
205 15" CEDAR ELM
206 11" HACKBERRY
207 9" HACKBERRY
208 9" HACKBERRY
209 10" HACKBERRY
210 7" HACKBERRY
211 9" ELM
212 15" HACKBERRY
213 11" PECAN
214 18" AMERICAN ELM
215 11" PECAN
216 13" CEDAR ELM
217 14" CEDAR ELM
218 11" CEDAR ELM
220 15" SPANISH OAK
221 10" CHINABERRRY
222 22" LIVE OAK
223 10" CEDAR ELM
224 21" CEDAR ELM
226 9" HACKBERRY
227 7" HACKBERRY
228 5" 5" MULBERRY
228 10" CEDAR ELM
229 8" 4" CHINABERRY
230 11" HACKBERRY
231 10" CHINABERRY
232 12" HACKBERRY
233 8" 2" 2" CHINABERRY
234 5" CHINABERRY
235 4" CHINABERRY
236 8" CHINABERRY
238 11" HACKBERRY
239 12" HACKBERRY
240 12" HACKBERRY
241 6" CHINABERRY
242 9" ELM
243 10" 8" ELM
244 8" ELM
245 8" HACKBERRY
246 10" 9" 9" 8" COTTONWOOD
247 5" COTTONWOOD
248 12" ELM
249 13" ELM
250 25" LIVE OAK

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

251 24" LIVE OAK
252 12" ELM
253 22" LIVE OAK
254 11" ELM
255 9" ELM
256 12" ELM
257 12" 12" ELM
258 13" ELM
259 11" ELM
260 26" MESQUITE
261 8" LIVE OAK
262 12" ELM
263 7" ELM
265 13" MESQUITE
266 14" MESQUITE
267 16" HACKBERRY
268 16" COTTONWOOD
269 10" HACKBERRY
269 13" 5" 5" 5" MESQUITE
270 13" PECAN
271 12" PECAN
273 6" ELM
274 8" TREE
274 4" 4" 4" HACKBERRY
275 17" HACKBERRY
276 12" CEDAR
277 11" CEDAR ELM
279 11" HACKBERRY
280 7" ELM
281 12" CEDAR ELM
282 7" CEDAR ELM
283 8" CEDAR ELM
284 12" CEDAR ELM
285 13" CEDAR ELM
286 13" COTTONWOOD
286 7" ELM
287 11" ELM
287 13" 12" CEDAR ELM
288 13" CEDAR ELM
289 22" LIVE OAK
400 5" 4" LIGUSTRUM
401 5" COTTONWOOD - TO BE REMOVED
402 5" CHERRY LAUREL
403 6" CHINABERRY
404 5" BOIS D'ARC
405 5" BOIS D'ARC
406 5" HACKBERRY
407 11" SHUMARD OAK
408 5" WILLOW

PROPOSED SHOAL CREEK WASTEWATER IMPROVEMENTS 29TH TO 34TH STREET

TREE SURVEY

409 10" 6" 4" WILLOW
410 6" CEDAR ELM - TO BE REMOVED
411 5" PECAN - TO BE REMOVED
501 14",14",12",12" CHINABERRY
502 22",12" LIVE OAK
503 6" HACKBERRY
504 6" HACKBERRY
505 6" HACKBERRY
506 8" HACKBERRY
507 4" LIVE OAK
508 7" HACKBERRY
509 7",6" HACKBERRY
510 32",20",12" LIVE OAK
511 17" LIVE OAK
512 10" LIVE OAK
513 23" PECAN
514 42" LIVE OAK
515 52" LIVE OAK
516 14" CHINABERRY
517 18" COTTONWOOD
518 9" COTTONWOOD
519 9" COTTONWOOD
520 7" COTTONWOOD
521 7" HACKBERRY
522 15",12",10" COTTONWOOD
523 8" HACKBERRY
524 5",4" AMERICAN ELM
525 5",5",4",4" COTTONWOOD
526 8",6" HACKBERRY
527 18" WILLOW
528 20",17" WILLOW
529 18",16" WILLOW
530 5",5" AMERICAN ELM
531 8",6" AMERICAN ELM

SHOAL CREEK 25TH TO 29TH
PROPOSED 8-INCH WASTEWATER LINE

TREE SURVEY

Tag Number	Size (inches)	Description
5305	9	elm
5306	4	elm
5307	4	elm
5308	4	elm
5309	18	elm
5310	10	elm
5329	16	
5372	5	elm (to be removed)
5373	4	elm
5374	5	elm
5375	12	elm
5376	12	elm
5377	6	elm
5378	12	elm
5379	6	elm
5380	8	
5381	6	elm
5382	5	elm
5384	12	elm
5385	9	elm
5386	15	elm
5387	9	elm
5388	12	mesquite
5389	7	mesquite
5390	10	elm
5391	15	elm
5392	5	
5393	12	
5394	12	elm
5395	5	elm
5396	8	elm
5397	12	elm
5398	12	
5399	6	cedar
5401	4	elm
5402	4	elm
5403	16	elm
5404	5	elm
5405	13	elm
5431	8	elm
5432	6	elm
5433	18	elm
5435	42	elm
5444	8	elm
5445	10	elm
5446	10	elm

SHOAL CREEK 25TH TO 29TH
PROPOSED 8-INCH WASTEWATER LINE

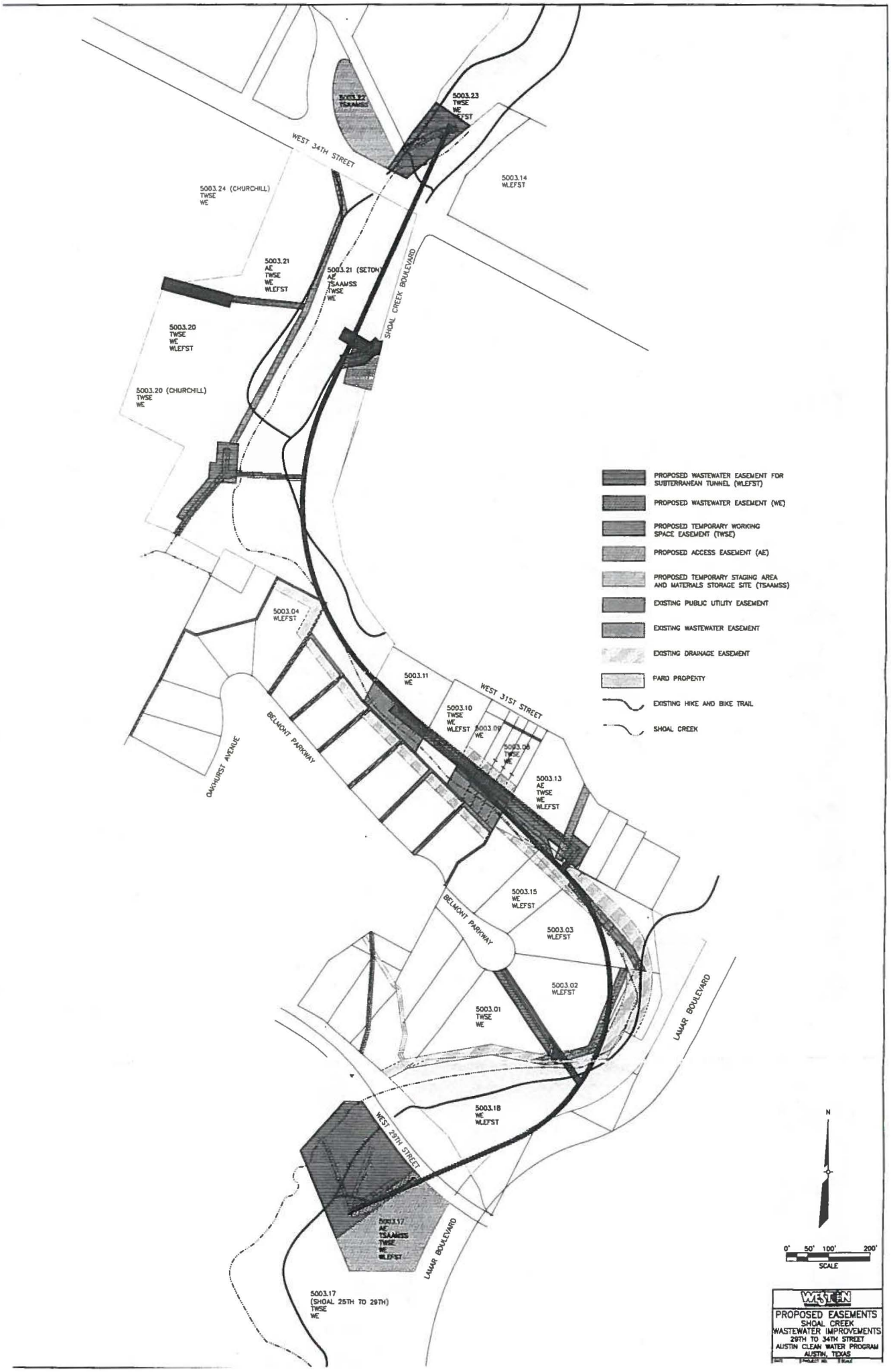
TREE SURVEY

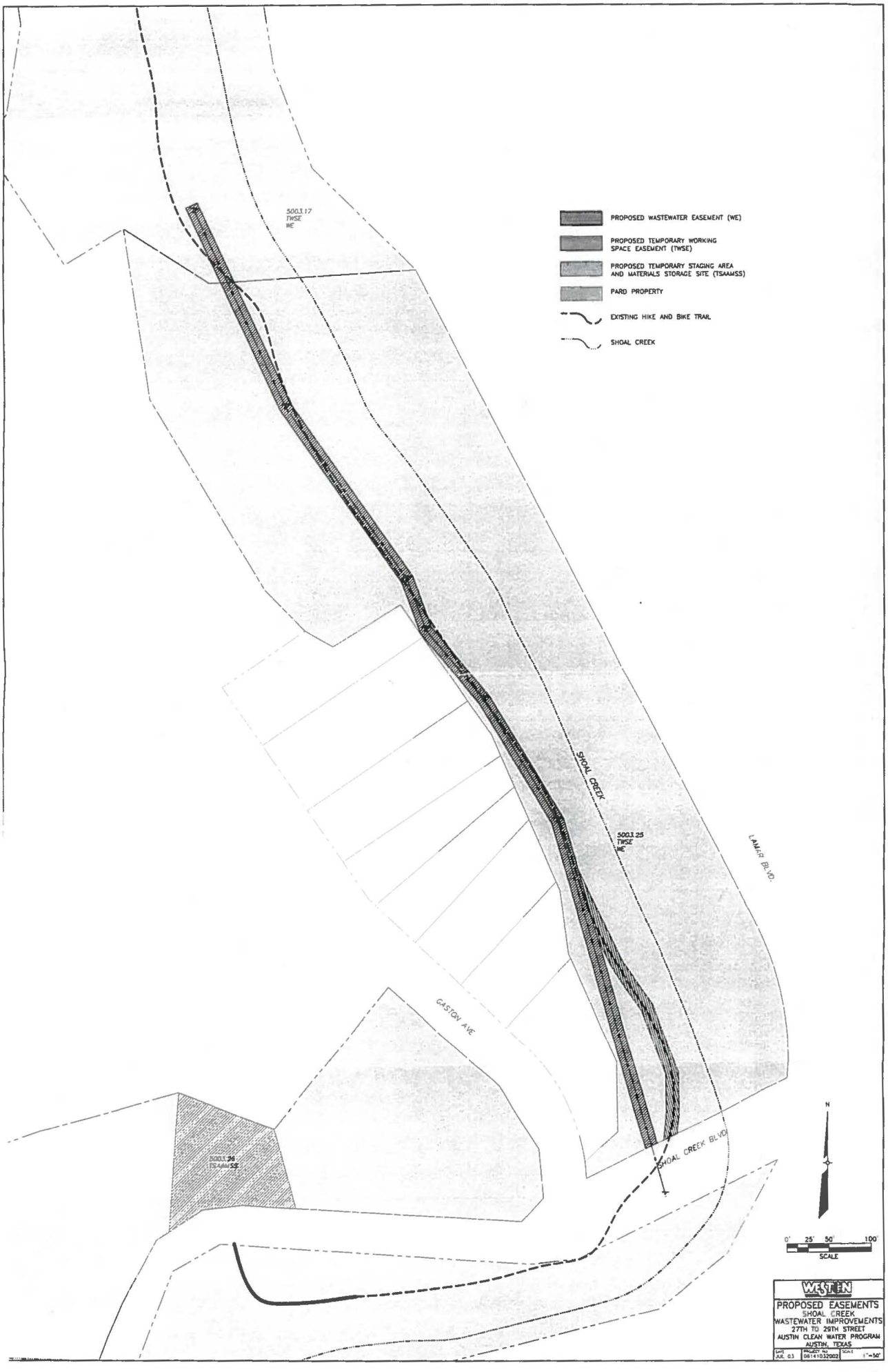
5447	10	cedar
5448	5	elm
5451	5	elm
5452	6	elm
5453	12	elm
5454	6	elm
5455	6	elm
5456	15	elm
5457	5	elm
5459	9	elm
5461	12	elm
5462	6	elm
5463	4	
5464	7	elm
5465	15	elm
5466	10	elm
5467	12	elm
5468	10	elm
5469	7	elm
5470	4	elm
5471	10	elm
5472	15	elm
5473	10	elm
5474	12	elm
5475	9	elm
5476	10	elm
5477	16	elm
5478	16	elm
5479	4	elm
5480	18	elm
5485	15	elm
5512	9	elm
5513	15	mesquite
5514	10	cedar
5515	12	elm
5516	12	elm
5517	10	elm
5524	12	elm
5525	12	elm
5526	15	
5527	12	elm
5537	12	elm
5538	6	elm
5548	12	cedar
5549	12	cedar
5550	12	elm
5551	6	elm
5575	18	elm

SHOAL CREEK 25TH TO 29TH
PROPOSED 8-INCH WASTEWATER LINE

TREE SURVEY

5576	10	elm
5577	10	elm
5578	12	elm
5579	12	elm
5580	12	cedar
5581	12	elm
5582	6	elm
5583	12	elm
5584	9	elm
5585	12	cedar
5586	8	elm
5587	14	elm
5588	10	
5589	10	elm
5590	6	elm
5591	10	elm
5592	5	elm
5593	11	elm
5594	9	elm
5595	9	elm
5596	16	
5597	6	cedar
5598	7	elm
5603	12	elm
5608	5	elm
5609	5	elm
5610	12	elm
5611	8	elm
5612	9	elm
8006	12	china
8012	5	
8017	6	
8043	7	to be removed
8071	5	
8091	13	
8101		to be removed
8102		to be removed
8104	15	
8105	15	
8119		to be removed
8121	8	


WEST 34TH STREET
5003.23
TWSE
WE
WLEFST
5003.14
WLEFST
5003.24 (CHURCHILL)
TWSE
WE
5003.21
AE
TWSE
WE
WLEFST
5003.21 (SETON)
AE
TSAAMSS
TWSE
WE
SHOAL CREEK BOULEVARD
5003.20
TWSE
WE
WLEFST
5003.20 (CHURCHILL)
TWSE
WE
5003.04
WLEFST
5003.11
WE
WEST 31ST STREET
5003.10
TWSE
WE
WLEFST
5003.09
WE
5003.08
TWSE
WE
5003.13
AE
TWSE
WE
WLEFST
OAKHURST AVENUE
BELMONT PARKWAY
5003.15
WE
WLEFST
BELMONT PARKWAY
5003.03
WLEFST
5003.02
WLEFST
5003.01
TWSE
WE
LAMAR BOULEVARD
5003.18
WE
WLEFST
WEST 29TH STREET
5003.17
AE
TSAAMSS
TWSE
WE
WLEFST
LAMAR BOULEVARD
5003.17
(SHOAL 25TH TO 29TH)
TWSE
WE
PROPOSED WASTEWATER EASEMENT FOR SUBTERRANEAN TUNNEL (WLEFST)
PROPOSED WASTEWATER EASEMENT (WE)
PROPOSED TEMPORARY WORKING SPACE EASEMENT (TWSE)
PROPOSED ACCESS EASEMENT (AE)
PROPOSED TEMPORARY STAGING AREA AND MATERIALS STORAGE SITE (TSAAMSS)
EXISTING PUBLIC UTILITY EASEMENT
EXISTING WASTEWATER EASEMENT
EXISTING DRAINAGE EASEMENT
PARD PROPERTY
EXISTING HIKE AND BIKE TRAIL
SHOAL CREEK
N
0' 50' 100' 200'
SCALE
WESTEN
PROPOSED EASEMENTS
SHOAL CREEK
WASTEWATER IMPROVEMENTS
29TH TO 34TH STREET
AUSTIN CLEAN WATER PROGRAM
AUSTIN, TEXAS


PROPOSED WASTEWATER EASEMENT (WE)
PROPOSED TEMPORARY WORKING SPACE EASEMENT (TWSE)
PROPOSED TEMPORARY STAGING AREA AND MATERIALS STORAGE SITE (TSAAMSS)
PARD PROPERTY
EXISTING HIKE AND BIKE TRAIL
SHOAL CREEK
5003.17 TWSE WE
5003.25 TWSE WE
5003.36 TSAAMSS
SHOAL CREEK
LAMAR BLVD.
GASTON AVE
SHOAL CREEK BLVD
N
0' 25' 50' 100'
SCALE
WESTON
PROPOSED EASEMENTS
SHOAL CREEK
WASTEWATER IMPROVEMENTS
27TH TO 29TH STREET
AUSTIN CLEAN WATER PROGRAM
AUSTIN, TEXAS
DATE JUL. 03
PROJECT NO. 06141032002
SCALE 1"=50'